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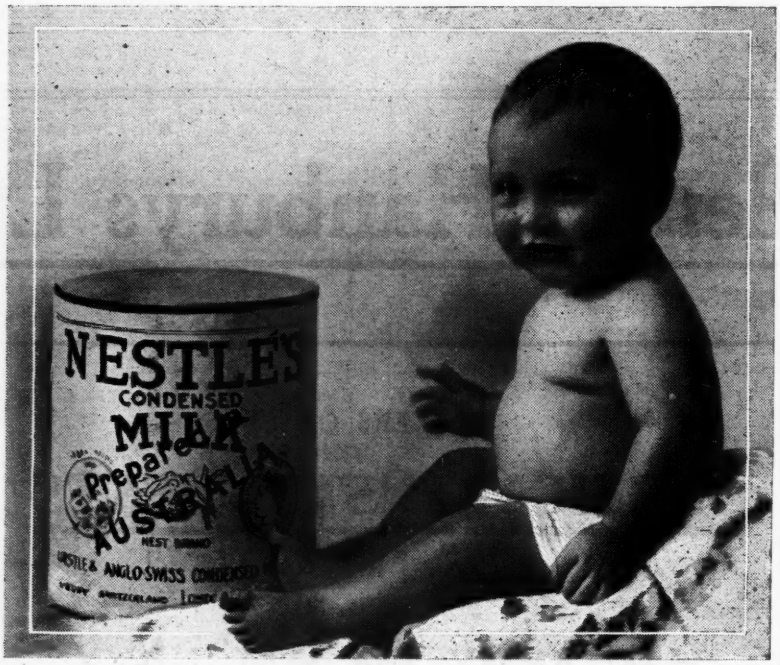

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THE RADICAL CURE OF PELVIC DEFORMITY.

By Henry Jellett, M.D., F.R.C.P.I.,
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I think it is time that some attempt should be made to remove a discredit that rests on obstetricians, inasmuch as, while successful attempts have been made to cure almost every other form of bone deformity by surgical intervention, the very serious deformity of contracted pelvis has been left practically unconsidered and uncured. It cannot be said in excuse that it is a condition which does not require cure, because, both for the sake of the patient, her unborn children and the annual birth-rate, cure, if possible, is advisable. Further, it cannot be said that no surgical cure is available, because for certain cases, at all events, it has been in our hands for years. If an excuse cannot be found, a reason, or, rather, several reasons can, and they are shortly these. Obstetricians have been divided into two camps in regard to cutting operations on the pelvic bones; a minority regard such operations not merely as justifiable, but as advisable. A large majority regard them as neither the one nor the other. Further, those who believe, have their belief narrowed and limited, because they have been brought up to regard such operations solely as a means of terminating a particular labour and have altogether, or almost altogether, passed by the larger view that they can be used as a means of effecting a permanent cure. I think the time has now come, both for a little plain speaking on this important subject and for a complete revision of our views. Plain speaking is necessary to those who would cut out of obstetrical surgery such operations. A revision of views is necessary for those of us who have recognized that the operations have their place therein, but have not recognized quite what that place might be. I ask in advance for pardon for two things. First, if I am rather dogmatic in this matter. I should not be so, if the evidence in favour of my views were not so overwhelming and if the opposition to them was not likely to be so strong. Secondly, if I am unwittingly regarding myself as the introducer of views which have already been brought forward by others. Necessity is my excuse for the one fault. Ignorance is my excuse for the other, if it exists.

The different cutting operations on the pelvic bones with the object of causing enlargement of the intrapelvic diameters may be reduced, for practical purposes, to one, namely, pubiotomy. The nature of this operation and its advantages over others of a similar kind are so well known as not to require description. The general views regarding it held by those who sanction its use, may be briefly stated as follows: It is a method of treatment to enable a particular labour to be successfully terminated. It is suitable for the second degree of pelvic contraction, *i.e.*, that degree in which the conjugate diameter measures between 8 cm. and 7 cm. in the case of a flat pelvis or between 8.5 cm. and 7.5 cm. in the case of a generally contracted pelvis. Pelves which measure above these lengths, are considered to be amenable to other lines of treatment. Pelves which measure below these lengths are considered to be too small. It is an alternative to Cæsarean section. It is to be carried out at the end of the second stage of labour, when the natural efforts fail to effect delivery, either with or without a preliminary attempt to deliver with the forceps. It is desirable that bony union of the cut surfaces should result.

I wish in this paper to disprove every one of these points, and perhaps it will facilitate my argument if I begin by saying what it is I want to prove. It is, shortly, as follows: First, that pubiotomy is not merely a method of terminating a difficult labour; it is rather a means of effecting a radical cure of pelvic contraction. Secondly, that it is indicated in both the first and second degrees of contracted pelvis. Thirdly, that it is not an alternative to Cæsarean section any more than the wiring of a fractured bone is an alternative to amputation of the limb. Fourthly, that it should never be postponed willingly to the end of the second stage, but should, ideally, be carried out independently of pregnancy when its effects are likely to be required. Fifthly, that every effort should be made to avoid bony union of the cut surfaces.

Before coming to the discussion of these points, however, I must first demonstrate to those who oppose the operation that it is a safe and advantageous one.

The safety of pubiotomy can best be proved by the statistics of thirty-five operations, to be found at the end of this paper, which operations were performed by my predecessors at the Rotunda Hospital or by myself. Of these thirty-five women, two died. The first patient died of heart failure immediately after delivery, due, as proved by a post-mortem examination, to fatty degeneration of the heart. The second patient died some weeks after delivery of acute miliary tuberculosis, as proved by post mortem examination. Five children out of thirty-six were born dead. One of these was the second of twins, the first child being alive, and another was hydrocephalic. In two cases injury to the bladder wall resulted. In one immediate cure followed the suture of the tear. In the second the fistula was not detected at the time of operation and so was not sutured. It occurred in the patient who subsequently died of acute miliary tuberculosis. Every patient, except the two who died, left the hospital in perfect health and with no impairment of the power of walking.

The advantages of pubiotomy can be best proved by two parallel cases, on both of which I operated myself, in the one case performing pubiotomy and in the other Cæsarean section. These cases are as follows:—

Mrs. E.B., flat pelvis, measuring 7 cm. in the conjugate and 10.80 cm. in the transverse. Delivered by Cæsarean section, March 14, 1919. She had four subsequent Cæsarean sections, the last being performed on November 22, 1918, when I also tied her tubes and did a plastic operation to restore her abdominal wall.

Mrs. C.O'C. (Case No. 13), generally contracted pelvis, measuring 7.3 cm. in the conjugate and 9.35 cm. in the transverse. Pubiotomy was performed on August 22, 1912.

a living child of 3,288 grms. (7¼ pounds) being born. She had four subsequent confinements, of which three were spontaneous deliveries, the children weighing 3,628 grms. (8 lbs.), 3,628 grms. (8 lbs.) and 3,800 grms. (8 lbs. 6 oz.) respectively, whilst one child was delivered also alive by the forceps, applied for no apparent reason, after she had been a few hours in labour. The last child was born on January 1, 1919, and her pelvis at that time measured 8.95 cm. in the conjugate and 11.85 cm. in the transverse. The measurements, both in 1912 and in 1919, were made by myself, and I have no reason to think that any material error occurs in them. The incision in the pubic bone had joined by fibrous union and the bones were mobile.

The deductions from these two cases are so obvious that I need not spend time in discussing them, and so I may pass on to the different points which I propose to try to establish.

First Point.—Pubiotomy is not merely a method of terminating a difficult labour; it is rather a means of effecting a radical cure of pelvic contraction. To prove this it is only necessary to refer to Tables II. and IV. at the end of this paper. It will be seen from them that, whereas in forty-five labours previous to pubiotomy, six children were delivered alive spontaneously and four delivered alive by the forceps, in twenty-two labours occurring subsequent to the labour at which pubiotomy was performed eleven children were delivered alive spontaneously, six delivered alive by the forceps and two by a second pubiotomy. Further, that the death of one of the three children born dead was due to *placenta prævia* and so must not be counted. These figures are very striking, in view of the fact that women who have difficult confinements after pubiotomy, naturally tend to return to hospital and so are included in the statistics, whilst women who have no trouble are perhaps usually content to remain at home and so escape observation. Moreover, in practically all these cases every effort has been made to promote bony union of the pubic incision and, whenever it occurred, the full benefit of the operation has not been obtained.

Second Point.—Pubiotomy is indicated in both the first and second degrees of contracted pelvis. Up to the present, the teaching of those who accept pubiotomy has been that the operation is indicated in the second degree only. In the first degree, it is usual either to allow the head to mould through the pelvic canal, or to perform prophylactic version. The moulding of the head through the pelvis in a case of contraction is, as every one knows, a tedious process, and a most painful one for the patient. It frequently results in the labour ending with the application of the forceps when perhaps the head is still above the pelvic brim and even in failure to deliver by this means. It is then too late to adopt measures other than perforation, and indeed in most cases the death of the child has already occurred. Similar difficulties and dangers to both mother and child recur at each subsequent labour and tend to increase in degree after the third or fourth in consequence of the increasing size of the child. Once we abandon the idea that pubiotomy is a means of ending a particular labour and regard it as a means of curing contracted pelvis, its adoption in the first degree is even more strongly indicated than in the second, because while occasionally it may fail in the lower limits of the latter degree to cause sufficient permanent increase in size in the pelvis, in the first degree it will probably always be successful.

It may be asked how one is to distinguish between the upper limits of the first degree of contraction and a normal pelvis. The answer will be furnished by the histories of the patients concerned. If a woman whose measurements are below normal, has difficult and dangerous labours obviously due to pelvic contraction, pubiotomy is indicated in order to produce safe and easy labours.

Third Point.—Pubiotomy is not an alternative to Cæsarean section any more than is the wiring of a fractured bone an alternative to amputation of the limb. Of necessity any observations on this point are in the nature of a repetition. Once it is admitted that pubiotomy is safe, and that it produces permanent cure, then it takes its place accordingly, while Cæsarean section, on the other hand, is only a means of effecting the termination of a particular labour. It has its uses. For example, in an elderly patient who is not likely to become pregnant again, it is a more certain method of ensuring the birth of a living child, since the ordinary dangers of labour are avoided. If it was a suitable operation to perform late in the second stage, I should advise its adoption in primiparæ who come under treatment too late for an early pubiotomy, because I believe almost all the risks associated with the latter operation are due to its late performance. Unfortunately, however, Cæsarean section is equally, or even more, unsuited for such cases on account of the risk of an existing infection of the uterus.

Fourth Point.—Pubiotomy should never be postponed willingly to the end of the second stage, but should ideally be carried out independently of pregnancy when its effects are likely to be required. So far as my experience goes the two principal causes of injury during or after pubiotomy are, first, the penetration of the bladder by the pubiotomy needle and, secondly, the combined association of the presence of blood beneath the vaginal mucous membrane and a gap in the bony support at the site of incision. Penetration by the needle does not concern us at the moment, while the other causes do. There is always bound to be a certain amount of hæmorrhage at the moment of operation as a result of small injuries to the vulvar venous plexus. This blood cannot readily escape and consequently tends to dissect a space for itself between the bone and the mucous membrane and there to form a hæmatoma. Further, at the point of separation of the ends of the bone, there is a gap which leaves the vaginal walls unsupported. As a result, when the vagina is forced to dilate by the descending head, it tends to tear where it is unsupported, and this tearing is made more extensive by the hæmatoma behind it. Such an accident is most prone to occur when delivery is effected in primiparæ by the forceps immediately after the pubiotomy. It is less likely to occur if delivery is spontaneous and still less likely to occur if the operation has preceded labour by some days or weeks. In other words, the more complete the recovery of the soft parts from the trauma of the operation, the less likely is laceration to occur, and the smaller will be its effects if it should occur. This suggests that the ideal time at which to perform

pubiotomy is when the patient is not pregnant, because then the vulvar blood supply will be at its smallest. Indeed, the only objection that can be raised to such a practice is that the patient might never require the effects of the operation, that is, she might never again become pregnant. When, however, future pregnancies are fairly certain to occur, I should advise operation independently of them. Further, I think it is a matter for consideration as to whether, when in a primiparæ, the existence of contraction is not recognized until the patient is in or very near labour, we should not deliver her by Cæsarean section and perform pubiotomy at a subsequent date for the benefit of future labours.

Fifth Point.—Every effort should be made to prevent bony union of the cut surfaces. I think I am right in saying that when pubiotomy was introduced, one great advantage it was said to possess over symphysiotomy was that bony union of the cut surface usually followed. This was believed to be an advantage, because it was supposed that without such union the pelvic girdle would be impaired, and there would be interference with the power of walking. Such a supposition is, of course, untenable, as is amply proved by cases in which the piece of bone between the saw cut and the symphysis has come away without harm to the patient and by the ambulatory powers of women who have been born with a split pelvis. On the other hand, the occurrence of bony union prevents any considerable permanent increase in the size of the pelvis and prevents any separation of the bones during labour. It can best be avoided by refraining from the prolonged use of the pubiotomy belt, by allowing patients early movement and by getting them out of bed as soon as possible after operation.

The following history is an interesting example of the important of this point:—

Mrs. M.G. (Case No. 17), pelvis measuring 9.3 cm. in the conjugate and 10.5 cm. in the transverse, had pubiotomy performed by me in November, 1913, a living child being delivered. According to the practice of that date, she was kept very quiet after the operation, with the result that bony union took place at the incision. She returned to the Hospital in February, 1916, and, in consequence of the failure of the head to enter the brim, Dr. Purefoy had to perform a second pubiotomy on the opposite side, a living child being extracted by the forceps. She came into Hospital again in January, 1919, the condition then being that my incision was united by bony union and the incision left by Dr. Purefoy by fibrous union, as diagnosed at the time and as proved by a subsequent skiagram. The membranes had ruptured before admission and the patient had very poor uterine contractions. She was given every opportunity to deliver herself, but this failing owing to the weak contractions, I had to apply the forceps and delivered a living child without the smallest difficulty.

I think this case conclusively proves the advantage of a non-rigid union of the bones.

It may be asked if it is possible to guarantee a non-bony union by the means I have suggested, and the answer will be that it is not possible to do so, but that such union is most likely to result if we deliberately try to produce it. If, on the other hand, further experience goes to show that bony union does result in some cases, in spite of every effort to prevent it, then there will be a legitimate reason for adopting some method which will positively prevent it. Such a method might be found in the removal of the fragment of bone between the saw-cut and the symphysis, a procedure which does not seem to give rise to any inconvenient consequences. For the moment, however, results appear to indicate that such a step is unnecessary. Once it is shown to be necessary, I do not see that we need have any hesitation in adopting it.

It may further be asked whether, even if non-bony union results, its fibres will stretch sufficiently to allow increase in size of the pelvis at subsequent labours. Here, I think, we are on surer ground. So far as my own experience goes, at any rate, delivery occurs without difficulty. The explanation is probably to be found in the softening and general relaxation which is known to occur in the fibrous ligaments of the pelvis towards the end of pregnancy, and which permits a slight temporary increase in the pelvic diameters during labour. In this case again, if a more extended experience shows that a sufficient increase in the pelvic diameters is not to be obtained in this way, it is possible that a bone grafting operation might give good results. For the moment, however, as I have said above, results appear to indicate that such a step is unnecessary.

The difficulties in the way of adopting such procedures as either excision of a piece of bone or bone grafting are not to be found in their inherent risks, which only occur once in the woman's life and which must be far less than the risks of repeated Cæsarean sections. They rather lie in the direction of determining whether the operation will be subsequently needed or not. My point, however, is that, if the patient wishes to have, and is likely to have, further pregnancies, even a bone grafting operation is a preferable procedure, once it is proved to be necessary, to repeated Cæsarean sections.

It is also possible that both bony and fibrous union might be avoided by exposing the line of incision and bringing a piece of the pubic fat between the bones. On these points, however, I do not want to express a definite opinion, first, because I do not know that any of them is necessary and, secondly, because I only want to insist on facts which I regard as established.

The foregoing five points constitute the main argument of this paper, but I should like to supplement them by a few words on certain alterations in the usual technique of the operation.

The first point on which I must insist is the necessity for accurate measurement of the internal diameters of the pelvis and the exclusion of such degrees or types of contraction as we cannot hope to overcome by division of the pubic bone. It is extraordinary that, at the present day, there are still so many obstetricians, possessing the highest skill and knowledge, who consider they cannot measure a pelvis with Skutsch's pelvimeter, or who think that its use is unnecessary. I am aware that great advances have been made in measuring by means of X-ray photographs, and such results are probably quite satisfactory if obtained by a radiologist accustomed to make them. The clinical difficulties in the way of the general extension of the practice are, however, very great. The ordinary error of a man accustomed to the use of the Skutsch instrument ought to be something less than 0.3 cm., and this gives sufficiently good working

results. The necessity for accurate measurement lies in the necessity for excluding from operation cases in which the pelvis is too small to allow the subsequent delivery of the fœtus alive and in good condition, without injury to the mother. The lowest limit is, I think, rightly put at 7 cm. in the case of a flat pelvis and 7.5 cm. in the case of a generally contracted pelvis. The first case in which pubiotomy was performed in the Rotunda Hospital is an example of the results of operating below this limit. In this patient the conjugate measured 6.5 cm.. The child, it is true, was delivered alive, but, of her four subsequent labours, one ended in craniotomy and three in Cæsarean sections. I have excluded this case from my statistics, because it does not fulfil the conditions laid down. We have no record in the hospital of any similar case so far as subsequent labours were concerned.

I do not propose to enter into a description of the operation itself, as it is too well known. There are just a couple of points to which I must refer. I do not like Bumm's sharp pubiotomy needle, because its point, if pressed against the bone, tends to stick in the latter and, if allowed to leave the bone, tends to wander into the bladder. I use a blunt Döderlein's needle, the elbow of which I have straightened so that it is no longer right-angled, but carries its curve in the continuation of the handle, as in the case of Bumm's needle. This necessitates making a nick in the skin to allow its entrance and another for its exit.

I think it is a matter for further consideration as to whether the subcutaneous method is advisable when the operation is performed under the most favourable circumstances. When the operation is done at the end of labour, just prior to delivery, the subcutaneous method undoubtedly possessed advantages. On the other hand, I am inclined to think that in operations done at the time of election, it will be found wise to make a small incision above the pubis, to separate the bladder from the back of the pubic bone in the region of the saw-cut and to pass the needle from above downwards. I think this is a more surgical performance and therefore likely to be adopted.

If the subcutaneous method is adopted, the condition of the inside of the bladder must always be examined. This should be done as soon as the needle has been passed and before the saw is pulled into place, with the object of excluding positively the entrance of the needle into the bladder. My own practice is to pass a catheter as soon as the needle has been introduced. If any drops of urine in the bladder are clear, it is a sign that all is well. If, on the other hand, there are any drops of blood, then a little fluid should be injected into the bladder and the anterior wall carefully examined with the catheter, in order to detect by sound and touch whether the needle has really entered or not. The presence of a little blood in the urine does not necessarily mean penetration of the bladder wall.

If penetration does occur, then the operation must be abandoned for the time being, if it is possible to do so, and, when next attempted, should be done by the open method at the opposite side. If its immediate performance is essential, as in the case of a patient well advanced in the second stage, the same course must be adopted. On no account is it permissible to pull the saw into position by a needle which has penetrated the bladder, as, subsequently, the included bit of bladder wall would be cut through by the saw and a large opening result. On the other hand, a mere puncture is probably of little importance if care is taken to empty the bladder at short intervals during the next week.

The only objection that can be legitimately urged against pubiotomy is the slight uncertainty that exists as to the exact position of the needle point at the moment it is passing over the upper margin of the pubis. This uncertainty, added to the slight variation that may exist in the exact relation of the anterior wall of the bladder to the same region, may result in perforation of the bladder wall. It is for this reason that I so strongly urge the performance of the operation as long before labour as possible, because then all uncertainty can be removed by performing the operation by the open method.

At the present time it is very difficult to get an opportunity of examining patients suffering from deformity previous to labour, because neither the patient herself nor the general practitioner who knows of her case, appreciates the importance of an early diagnosis. This, however, is only a matter of education and, once its importance is recognized, then women in whom deformity is suspected, will come under treatment in good time. The object of this paper is to remove the false impressions that surround the operation and any intrinsic uncertainties that attach themselves to its performance. Hence, I strongly urge on medical men the necessity for early diagnosis, in order that early treatment may follow.

I may say a word to emphasize the importance of using sharp saws. Operators of non-mechanical tendencies are apt to think that, because the instrument was once a saw it remains so indefinitely. This is a fallacy which leads to a lengthy forcing of the saw through the bone, with attendant sawing of the skin and soft parts.

The after-treatment of the case is of much importance. Bony union, being not only unnecessary, but detrimental, must be avoided. At the same time, the necessary approximation of the bones must be ensured. I am inclined to think that, even if no particular care is taken, this approximation will occur spontaneously. It is, however, well to apply a pubiotomy belt as soon as the operation is done and to have the belt in place during labour, to avoid undue separation of the bones. On the other hand, it must not be too tight to allow the correct amount of separation. It may be taken off as soon as the bones tend to remain in fairly close apposition of their own accord, and this will be probably about the fourth or fifth day. Any movements of the patient which do not cause pain, may be allowed. There should be little or no tenderness in the region of the incision, and its occurrence usually shows that some infection has occurred. The patient may leave her bed, if convalescence has been normal, any time after the tenth day, when there should be no impairment of the power of walking other than a slight stiffness, which soon passes off.

Table I.

No.	Name.	Number of Labour.	Nature of Previous Labours.	Pelvic Measure. C.V. cms.	Pelvic Measure. T. cms.	Date of Operation.	Operator.	Result. Mother	Result. Child	Weight of Child in Pounds.	Nature of Subsequent Labours.
1.	C.S.	V.	I. Breech; dead II. Breech; dead III. Miscarriage IV. Breech; alive, but died	7.5	12	March, 1907	Dr. Tweedy	A	D	6¼	VI. Spontaneous; alive; 8½ lbs.; April, 1909 VII. Spontaneous; alive; 7¾ lbs.; May, 1910 X. Spontaneous. impacted breech; alive; very large; March, 1914
2.	B.G.	IV.	All difficult; forceps; version, etc.; dead	8	11.5	May, 1907	Dr. Tweedy	A	A	8¾	———
3.	E.B.	I.	———	7 On return 8.5	10.5 On return 10.5	May, 1907	Dr. Tweedy	A	A	7¾	II. Spontaneous; alive; 7½ lbs.; May, 1908
4.	S.F.	IV.	I. Forceps; dead II. Induction thirty - third week; child alive; 3 lbs. III. Induction thirty - sixth week; version; dead; 5¾ lbs.	7	11.5	June, 1907	Dr. Tweedy	A	A	10	———
5.	M.D.	III.	I. Symphysiotomy; dead; July, 1907 II. Abortion	8	12.8	Septem., 1910	Dr. Tweedy	A	A	6¾	———
6.	R.N.	I.	———	8.5	12.4	Novem., 1909	Dr. Tweedy	A	A	8	II. Spontaneous; alive; 8½ lbs., July, 1912
7.	M.O'T.	IV.	I. Forceps; dead II. Forceps; dead III. Forceps; dead	7	—	October, 1910	Dr. Tweedy	A	A	7¾	V. Transverse; podalic version; dead; 6¼ lbs.; January, 1913 VI. Forceps; alive VII. Forceps; dead VIII. Breech; alive IX. Pubiotomy; alive (*vide* No. 32)
8.	M.C.	III.	I. Craniotomy II. Craniotomy	8.3	13	Novem., 1910	Dr. Tweedy	A	A	7	IV. Spontaneous; breech; alive; 8½ lbs.; March, 1914
9.	M.K.	II.	———	—	—	Novem., 1910	Dr. Jellett	A	A	6¾	———
10.	M.B.	IV.	I. Forceps; alive II. Spontaneous; alive III. Spontaneous; alive	7.2	12.4	March, 1911	Dr. Jellett	A	A	6¾	V. Forceps; alive; June, 1912
11.	K.B.	I.	———	7	12.5	March, 1912	Dr. Jellett	A	A	6¾	II. Placenta prævia; hydramnios; internal version; dead; 6¼ lbs.; March, 1913
12.	M.W.	II.	———	—	—	June, 1912	Dr. Jellett	A	A*	—	———
13.	C.O'C.	I.	———	7.3	9.3	August, 1912	Dr. Jellett	A	A	7¼	II. Spontaneous; alive III. Spontaneous; alive IV. Forceps; alive V. Spontaneous; alive
14.	M.R.	III.	———	8.5	—	April, 1913	Dr. Jellett	A	A	8¾	———
15.	R.M.	II.	I. Spontaneous; premature; alive	9.4	—	April, 1913	Dr. Jellett	A	A	8¼	———
16.	R.S.	IV.	I. Forceps; alive II. Brow; version; lived a few minutes III. Brow; forceps; lived one hour	9.1	11	August, 1913	Dr. Jellett	A	A	9½	———

* Died in 10 minutes. Hydrocephalic and spina bifida.

Table I.—*Continued.*

No.	Name.	Number of Labour.	Nature of Previous Labours.	Pelvic Measure. C.V. cms.	Pelvic Measure. T. cms.	Date of Operation.	Operator.	Result. Mother	Result. Child	Weight of Child in Pounds.	Nature of Subsequent Labours.
17.	M.G.	IV.	I. Forceps; alive II. Forceps; dead III. Forceps; dead	—	—	Novem., 1913	Dr. Jellett	A	A	10½	V. Pubiotomy; alive; 9⅝ lbs.; February, 1916 (*vide* No. 23) VI. Forceps, due to uterine inertia; alive; 8½ lbs.; January, 1919
18.	M.C.	V.	I. Forceps; lived a day II. Forceps; lived a few minutes III. Craniotomy IV. Craniotomy	8	11.25	April, 1914	Dr. Jellett	A	A	10	———
19.	A.R.	I.	———	8	9.3	August, 1914	Dr. Jellett	D	A	6¼	———
20.	F.M.	I.	———	8	9	July, 1915	Dr. Tweedy	A	A D	5½ 4⅝	II. Spontaneous; alive
21.	K.C.	X.	I. Twins; dead II. Forceps; dead III. Premature (7 months) IV. Spontaneous; alive V. Forceps; dead VI. Abortion VII. Spontaneous; alive	—	—	Septem., 1915	Sir Wm. Smyly	A	A	5½	———
22.	E.D.	VII.	Not recorded	—	—	Decem., 1915	Sir Wm. Smyly	A	D	9¼	———
23.	M.G.	V.	I. Forceps; alive II. Forceps; dead III. Forceps; dead IV. Pubiotomy; alive (*vide* No. 17)	9.5	10.25	February, 1916	Dr. Purefoy	A	A	9⅝	VI. Forceps, due to uterine inertia; alive; 8½ lbs.; January, 1919
24.	J.J.	I.	———	8.75	—	June, 1917	Dr. Tweedy	A	A	6⅓	II. Forceps; alive
25.	M.K.	I.	———	9	—	July, 1917	Dr. Purefoy	A	D	7½	———
26.	L.B.	I.	———	8.8	11	January, 1918	Dr. Jellett	A	A	6⅝	———
27.	M.K.	I.	———	8.2	—	April, 1918	Dr. Jellett	A	A	7⅓	———
28.	M.O.	II.	I. Abortion	8.5	—	April, 1918	Dr. Jellett	A	A	6⅞	———
29.	L.D.	I.	———	8	12.3	June, 1918	Dr. Jellett	A	D	7¼	———
30.	M.C.	I.	———	9	11.5	July, 1918	Dr. Jellett	D	A	5¾	———
31.	C.D.	I.	———	8.6	—	July, 1918	Dr. Jellett	A	A	6 1/16	———
32.	M.O'T.	IX.	I. Forceps; dead II. Forceps; dead III. Forceps; dead IV. Pubiotomy; alive (*vide* No. 7) V. Transverse; podalic version; dead; January, 1913 VI. Forceps; alive VII. Forceps; dead VIII. Breech; alive	7	—	Septem., 1918	Dr. Jellett	A	A	7⅛	———
33.	S.W.	I.	———	7.7	13.7	January, 1919	Dr. Jellett	A	D†	9⅛	———
34.	S.H.	II.	I. Forceps; dead	8.4	11.8	January, 1919	Dr. Jellett	A	A	7¼	———
35.	M.McT.	V.	I. Spontaneous; dead II. Transverse; dead III. Cæsarean section; alive IV. Cæsarean section; alive	7.5	12.5	January, 1919	Dr. Jellett	A	A	6½	———

† Hydrocephalic.

In conclusion, I should like to suggest that there are certain points in regard to pubiotomy which we must consider to be proved and which may be summarized as follows:—

(1) Pubiotomy is a safe operation.

(2) It both enables a particular labour to be terminated satisfactorily and it cures certain degrees and types of contracted pelvis.

(3) It should be performed as long before the delivery of the patient as possible.

(4) Bony union of the cut surfaces is unnecessary and disadvantageous.

On the other hand, there are certain points which are still to be decided, and amongst them I may mention three:—

Should pubiotomy be performed independently of pregnancy and labour?

Should it be done by the open method?

Should any special steps be taken to prevent bony union?

Prima facie, it would appear as if the first two questions, at all events, should be answered in the affirmative and that by so doing we shall prevent complications.

It seems to me that it will require some very powerful, not arguments, but facts, to disprove the statements I have made in the foregoing paper and the consèquences I have deduced from them. They will certainly not be disproved by the old fable of the number of crippled women who have been seen after pubiotomy, because I do not think anyone quite believes in them any longer. Nor can that very hoary obstetrical stumbling block serve as an obstruction—that the operation is unsuitable for performance by the general practitioner. Of course it is unsuitable, if for no better reason than that the only cases in which he is likely to be called on to perform it are those in which immediate delivery is necessary and in which, consequently, it is most likely to be difficult and complicated. But, surely, obstetrical specialists must be very hard set for an objection, if they have to resort to one of this type.

The part to be played by the general practitioner in regard to pubiotomy is of considerable importance. It consists in sending patients in whom he suspects the existence of contracted pelvis for accurate diagnosis and surgical treatment at as early a period in pregnancy as possible, or even before pregnancy occurs and not, as is so often the case at present, after the patient has come into labour.

I said at the beginning that plain speaking was necessary, and now I make no apology for my last sentence. The operating obstetrician and gynæcologist of to-day has no right to allow himself to be prejudiced by the unproved criticisms and traditions of others in regard to an operation which offers so much benefit to the great majority of women suffering from contracted pelvis.

Table II.—Nature of Previous Labours.

Nature of Labour.	Number.	Result to Child. Alive.	Dead.
Spontaneous	12	6*	6
Induction	2	1	1
Forceps	21	4	17
Version	2	—	2
Craniotomy	4	—	4

* Two of these were premature.

Nature of Labour.	Number.	Result to Child. Alive.	Dead.
Symphysiotomy	1	—	1
Unclassed	3	—	3
Total	45	11	34

Table III.—Nature of Pubiotomy Labour.

No. of Cases.	Results to Mother. Alive.	Dead.	Results to Child. Alive.	Dead.
35	33	2	31	5

	Cases.
Causes of material deaths—	
Collapse due to fatty degeneration of the heart	1
Acute miliary tuberculosis	1
Causes of fœtal deaths—	
Prolonged labour	3
Second of twins	1
Hydrocephalus	1

Table IV.—Nature of Subsequent Labours.

Nature of Labour.	Number.	Result to Child. Alive.	Dead.
Spontaneous	11	11	—
Forceps	7	6	1
Version	2	—	2†
Pubiotomy	2	2	—
Total	22	19	3

† One death due to placenta prævia.

SOME INTERESTING DETAILS OF AN OUTBREAK OF SCORBUTUS.

By **W. A. T. Lind, M.B., Ch.B. (Melb.),**
Pathologist, Victorian Lunacy Department.

Between August and December of the year 1918 the Idiot Cottages at Kew, Victoria, were visited by an outbreak of scurvy which showed some interesting features in view of the discussions which have taken place recently in other parts of the world, concerning the ætiology of this disease. The disease affected the inmates of three cottages only, the Male Hospital, the Female Hospital and the Nursery. The first-named building is situated several hundred yards from the other two buildings which are about fifty yards from each other, but patients are frequently transferred from the Nursery to the Male Hospital. There are no transfers from the Nursery to the Female Hospital. Investigations showed the following:—

(*i.*) All the patients affected were cripples and confined to bed or chair.

(*ii.*) The disease attacked both sexes with the same intensity and frequency.

(*iii.*) This is the first occasion in which the disease has appeared in the institution.

(*iv.*) There has been no alteration in the dietary of the patients for years.

(*v.*) Other patients suffering from the same crippled conditions and with the same food were unaffected.

(*vi.*) All the milk used in the instution is boiled before the patients consume it.

(*vii.*) The food given to these hand-fed patients

Name.	Received.	Sex.	Ward.	Age in 1918.	Onset of Scurvy.	Symptoms Manifested.	Diet at Time of Onset.	New Diet.	Result.
D.O'C.	26.8.12	M.	Male Hospital	10 years	20.10.18	Left leg swollen and painful; mouth sore	Bread, milk and rice	No special diet; mouth wash	Died 24.12.18
R.W.C.	26.3.14; transfer from Nursery, 2.7.18	M.	Male Hospital	8 years	27.12.18	Knee and ankle swollen; mouth sore	Rice, sago, bread and milk	28.12.18: Raw eggs, raw milk, lime water, lemon juice	Recovery
G.McD.	23.9.08; transfer from Nursery, 23.8.17	M.	Male Hospital	11 years	12.12.18	Mouth sore	Bread, milk, rice	27.12.18: Raw eggs, raw milk, lemon juice, lime water	Recovery
E.J.L.	17.5.16	M.	Male Hospital	9 years	26.10.18	Gums and mouth bleeding; blotches on body	Bread, milk, rice, sago, soup	28.12.18: Raw eggs, raw milk, lemon juice, lime water	Recovery
W.L.	29.9.16; transfer from Nursery, 15.7.18	M.	Male Hospital	6 years	14.12.18	Left ankle swollen, mouth sore	Bread, milk, rice, sago	28.12.18: Raw eggs, raw milk, lemon juice, lime water	Recovery
S.M.V.	13.2.17	M.	Male Hospital	9 years	20.12.18	Mouth sore	Bread, milk, rice	28.12.18: Raw eggs, raw milk, lemon juice, lime water	Recovery
B.O'B.	28.6.15	F.	Female Hospital	12 years	8.10.18	Feet and legs swollen; gums sore	Soup, bread, beef tea, milk, porridge, rice, sago	No special diet	Died 20.10.18
A.G.	10.4.06	F.	Female Hospital	18 years	10.10.18	Gums bleeding; face, left knee and right leg swollen	Milk, sago, malzena, rice	27.12.18: Raw eggs, raw milk, lemon juice, lime water	Died 1.1.19
I.O.M.	1.11.11	F.	Female Hospital	12 years	7.10.18	Gums bleeding; ankles swollen; pains in legs	Milk, beef tea, malzena, rice	27.12.18: Raw eggs, raw milk, lemon juice, lime water	Recovered
M.C.G.	12.1.17	F.	Nursery	5 years	2.11.18	Left shoulder and arm swollen; spongy gums	Porridge, beef tea, bread, malzena, milk	27.12.18: Raw eggs, raw milk, lemon juice, lime water, malzena, beef tea, bread, porridge	Recovery
V.M.R.	10.2.12	F.	Nursery	8 years	23.11.18	Legs swollen; gums spongy	Sago, bread, milk, beef tea, rice	Raw milk, raw eggs, lemon juice, lime water, beef tea, malzena, sago	Recovered
G.G.B.	13.3.16	M.	Nursery	5 years	21.8.18	Knee swollen	Sago, rice, beef tea, bread, vegetables	No special diet	Died 24.8.18

contains excess of carbo-hydrates over the proteins and it is all cooked.

(*viii.*) The timing of the onset in each ward suggested a contagious disease.

(*ix.*) The scurvy cleared up in the majority of the cases shortly after the patient's received the following special dietary: raw eggs, lime water, lemon juice and raw milk. A more liberal supply of vegetables, porridge and beef tea was given to all patients receiving invalid diet.

(*x.*) Those patients who died were examined *post mortem* and showed extensive hæmorrhage under the periosteum of the long bones and separation of epiphyses.

The accompanying synopsis of the patients affected, when read in conjunction with the above ten facts, suggests that, in addition to the lack of certain vitamines, there may be a contagious infection present. The evening temperature of the patients was usually about 38° C.. Besides the theories of deprivation, organic poisoning and specific organism, the text-books lay stress upon other factors, such as nostalgia, depressing influences, overcrowding, dwelling in cold damp quarters, etc., none of which need be seriously regarded in this epidemic, as the quarters are good, the temperature at the particular time of the year mild and the patients totally indifferent to the call of home and mother. On the other hand, the very moderate elevation of temperature to 38° C. in the evening and the non-purulent condition of the subperiosteal blood collection even after some days duration, are not characteristic of infections which might produce such far-reaching effects.

In addition to the symptoms recorded in the synopsis of the cases there were the indications of malaise, such as would be expected in this condition. There are about 360 patients in the Idiot Asylum housed on the cottage principle, each cottage being about 30 yards from the nearest one, but the patients with the exception of those in the three wards affected all feed in a common dining hall. With the exception of one table, where ordinary meat is served, all these patients in the dining hall are placed on a "mince" diet. The only patients who became scorbutic were those who were receiving invalid diet in the Nursery and the two Hospitals. The diet was the same as they had been getting for years.

It will be interesting to know if any other institution has had any similar experiences with scurvy lately.

CLINICAL DIAGNOSIS OF SPANISH INFLUENZA.

By **D. P. O'Brien, M.B., F.R.C.S.I.,**
Rockhampton.

The literature from Chicago, London and Paris shows that like dengue and true influenza, this disease is mutile. Nearly all descriptions of it relate to hospital patients and therefore do not give a true picture of the epidemic in general. Its onset, course and termination are so like those of true influenza that a contrast with the latter will bring out the salient points of the former. For clinical purposes Spanish influenza may be divided into two types, namely, the catarrhal and pneumonic. There is much evidence to

show that each is a distinct disease and that there is a symbiosis between them, whereby one excludes the other.

A patient with catarrhal disease rarely developes pneumonia subsequently and *vice versa* the pneumonic disease is crepitating from the first day. Practically all fatal cases are pneumonic and during the Rockhampton epidemic, special foci of pneumonic infection were noted where two or more fatal cases occurred.

At these foci all the inmates developed pneumonia and others who had been in close contact with those patients also developed pneumonia. On the other hand, less than 10% of the total number of cases were pneumonic. The above indicates that each is a separate disease and that pneumonic cases are not merely a more intense type.

The catarrhal type of Spanish influenza differs from that of true influenza by a tendency to affect the larynx, causing an intense laryngitis with loud spasmodic cough and expectoration of blood-stained mucus; the nasal catarrh is also frequently hæmorrhagic and there is much less bronchitis.

Myocarditis with interference with the heart centres and tract is rare and the subsequent cardiac weakness during convalescence so common in even mild cases of true influenza is not seen. Soon after getting up, patients resume severe physical exertions without evidence of cardiac weakness, though in some cases a rise in temperature follows exercise taken too early, but without any sign of heart trouble. Absence of primary heart complication is the most striking difference from true influenza and that difference is equally striking in pneumonic cases. Hæmorrhages from the stomach, bowels, bladder and under the skin are seen in a small number.

In the pneumonic type coarse inspiratory crepitations are heard at the bases of both lungs on the first day, beginning either at the very lowest edge at the back or a little higher up and spreading up both lungs usually a little more on the side the patient lies on, but not round the sides nor in front. Consolidation with tubular breathing and dulness is rare. Pleurisy is likewise rare and, when it appears, is sometimes over a part of the lung other than that crepitating. Crepitation is the special feature of this type of pneumonia. In slight cases it is not audible until the patient is made to cough. It is loud, coarse and confined to the inspiratory period until resolution sets in, when it is heard during expiration. The crepitations are heard on the first day and continue throughout the disease, until resolution is complete. Resolution does not coincide with the disappearance of fever; in fact, the crepitating area continues for many days after the temperature is normal, gradually resolving. The sputum at first contains bright blood, mixed with rusty mucus and subsequently it is muco-pus alone, until resolution sets in, when it again becomes blood-stained and rusty. The presence of muco-pus accounts for the absence of much consolidation, the material exuded being unable to solidify, as it does in ordinary pneumonia.

When the affected area reaches a variable height up the back, cyanosis of an intense character is noticed, the tongue becoming a dark blue grey, the face a dusky greyish blue and the nails and skin generally assuming the same tint. At this stage the heart shows signs of distress from defective oxygenation of its muscle, not from myocarditis. This is indicated by the fact that should cyanosis disappear or lessen rapidly, as it often does, cardiac action and the area of cardiac dulness quickly become normal. The change in the pulse-respiration ratio constantly present in other forms of pneumonia is not noticed in this. Both the pulse and respiration vary greatly. In cyanotic cases, their rise and fall do not correspond with the lung trouble, but rather with the delirium or heart distress. In several fatal cases I have seen the respirations 22 one day, 45 the next and fall again to between 20 and 26 when patient quietened down. The extent of lung involvement in cyanosed cases is very great and accounts for the blueness.

Violent spasmodic cough is present in all pneumonic cases from the beginning till the end, due to the irritating crepitation, which likewise goes on continuously until complete resolution, unlike ordinary pneumonia in which there is an interval of consolidation without crepitation.

Night delirium is usual in all—very slight in mild but continuous night and day in fatal cases.

During the course of the disease one or more attacks of profuse sweating occur with sudden fall of temperature to sub-normal. In bad cases or those that end fatally, it rises again to its previous height (40° or 40.5° C.). In others it rises to a lesser height than it had been and then assumes an irregular hectic type till normal.

Hyperpyrexia is usual in all severe cases and does not correspond to the amount of lung involved, though usually there is a large amount of diseased lung in cases with high fever. The high temperatures, sweatings and delirium would indicate a septicæmic state and not merely pneumonia; this is borne out by the fact that in cases of extensive lung involvement which end in recovery, the temperature regains the normal without the lung resolving and the latter, as before stated, goes on resolving for a week or two with a normal temperature. Repeated attacks of night sweating at irregular intervals with fall of temperature to sub-normal and a subsequent rise to a variable height is a feature of both pneumonic and catarrhal cases. Even after the temperature has assumed a normal course, night sweats at intervals are noticed and particularly in the pneumonic form.

One or two points may be devoted to treatment. When there is any cyanosis or difficulty in breathing, the patient should be put in Fowler's position or in the semi-prone position, partly on the right side, with the head and chest well raised with pillows and the arms stretched out. Both positions relieve the breathing, lessen the cough and, of most importance, relieve the dilated heart. The bowels are usually difficult to move and when cyanotic vomiting sets in, hypodermics of pituitrin, strychnine and digitalis relieve it by improving the circulation and contracting the bowels which have become stagnant. Sleeplessness is common in both severe and mild cases and exhausts the patient greatly. The majority of hypnotics fail to relieve it, a hypodermic injection of 0.0075 to 0.01 grm. of morphine quietens the heart and nervous systems and when combined with the injection re-

ferred to above, does not paralise the bowels. The patient should be placed in a large, well ventilated room or on a balcony or verandah in the open air. Plenty of fresh air is the natural indication in cyanosis. Exposure does no harm; on the contrary, it causes deeper respiration and diminishes cyanosis. Otherwise the treatment is symptomatic and on general lines.

Reviews.

TROPICAL DISEASES.

The third edition of Stitt's "Diagnostics and Treatment of Tropical Diseases"[1] has been published less than twelve months after the appearance of the second edition and the changes are small, the only one of importance being the section on trench fever.

The book is of a convenient size and contains a considerable amount of information which should be of use not only to the student of tropical medicine, but also to the practitioner in cool climates who may from time to time see patients from tropical countries.

The descriptions of the different diseases met with in tropical countries are clear and comprehensive, the symptomatology and epidemiology being particularly good.

One would like to see more attention given to the diseases of the skin which are so prevalent in tropical countries.

The author rightly insists that such diseases as syphilis, tuberculosis, and pyogenic infections which are common in temperate climates, are at least equally common in tropical countries and must not be overlooked. He also points out that in the tropics the definite finding of a cause sufficient to account for an illness is not always sufficient to give the key to the diagnosis. "A single individual may be found upon examination to have amœbiasis, malaria, filariasis and syphilis, yet none of these infections prevent him from following his usual occupation. When such a patient comes to a ward, it requires a correlating mind to eliminate four or five definite diagnoses and to fix upon some disease common to both tropics and temperate climates, as for example, typhoid fever." Anyone who has practised in a tropical country, must realize the truth of this statement.

The sections on diagnostics will probably be of use to some readers, although they are not so good as the sections on the individual diseases. There is at times a lack of care which leads to ambiguity, if not to actual error. Thus in one paragraph there is a statement that "as a practical point it is very rare that a red count is indicated." In the next paragraph the author states that "as regard hæmocytometry, it may be stated that in the tropics the counting of red cells is required more frequently in comparison to white ones than is the case in temperate climates. . . . This is on account of the frequency of secondary anæmias in the tropics."

One regrets to see that Australian work and Australian conditions in relation to tropical diseases are almost entirely ignored and what information is given is frequently incorrect. There are some useful maps showing the geographical distribution of different diseases. In these Australia is shown to be free from malaria; beri beri is restricted to the district around Broome, although it is quite common in Queensland and the Northern Territory; anchylostomiasis is shown to be widely prevalent in New South Wales and Victoria, less so in tropical Queensland, although it is unknown whether there have been any endemic cases in New South Wales and Victoria; Australia is not mentioned in connexion with sprue.

While these defects detract from its value, the book is, on the whole, a very successful attempt to give in a concise and comprehensive manner descriptions of the various diseases met with in tropical countries. Further, it is of convenient size for carrying in the pocket.

[1] The Diagnostics and Treatment of Tropical Diseases, by E. R. Stitt, A.B., Ph.G., M.D., LL.D.. Third Edition, revised, with 119 illustrations; 1919. Philadelphia: P. Blakiston's Son & Co.; Crown 8vo., pp. 534. Price, $2 net.

THE REMUNERATION OF MEDICAL OFFICERS IN THE LUNACY DEPARTMENT.

A deputation of the Council of the Victorian Branch of the British Medical Association waited on the Chief Secretary on July 23, 1919, for the purpose of laying before him the facts concerning the remuneration of medical officers employed in the hospitals for the insane and of urging him to give favourable consideration to the suggestion that the salaries should be increased. It was pointed out that junior officers received from £372 to £432 a year, less a deduction of £60 for quarters and allowances. The senior assistant medical officers received from £468 to £516, less a deduction of £72, and the medical superintendent received £700 a year, less a deduction of £100. The members of the deputation stated that efficient service could not be expected, unless the remuneration were adequate. They suggested that there should be no deductions and that the salaries should be as follows:—

Medical superintendents, from £800 to £900 a year.
Senior medical officers, from £600 to £700 a year.
Junior medical officers, from £450 to £550 a year.

The Inspector-General of the Insane, Dr. W. Ernest Jones, supported the suggestion and presented a revised scale of salaries, which, while somewhat lower than those suggested by the deputation, includes the payment of a pension after a specified term of service.

The Chief Secretary received the suggestions in a sympathetic vein and promised to lay before the Cabinet the proposals submitted to him by Dr. Ernest Jones. He stated that he would advocate the adoption of this scale.

WALTER AND ELIZA HALL INSTITUTE OF RESEARCH IN PATHOLOGY AND MEDICINE.

Dr. N. Hamilton Fairley has been appointed First Assistant at the Walter and Eliza Hall Institute of Research in Pathology and Medicine, Melbourne. His appointment was unanimously recommended by the members of the Advisory Committee in London, Sir John Rose Bradford, F.R.S., Sir Almroth Wright, F.R.S., Dr. C. J. Martin, F.R.S., and Dr. S. W. Patterson, the Director of the Institute. Dr. Fairley carried out an important research in 1915 on cerebro-spinal meningitis and published his first paper on this subject, together with Dr. J. V. Guest, in *The Medical Journal of Australia* of October 23, 1915. He received his commission as Captain in the Australian Military Forces in August, 1915, and in September, 1916, he joined the Australian Imperial Force. He obtained his majority in January, 1918. He was created an Officer of the Order of the British Empire in January, 1919, and was later promoted to the rank of Lieutenant-Colonel. He has served in Egypt as Pathologist to the No. 14 Australian General Hospital, Port Said, and as Lecturer on Parasitology at the Cairo School of Medicine. Among his recent publications may be mentioned one dealing with complement deviation in bilharziosis (see *The Medical Journal of Australia*, March 29 and April 5, 1919).

PNEUMONIC INFLUENZA.

A number of proclamations, dealing with pneumonic influenza, have been published in the *New South Wales Government Gazette* on July 25, 28 and 30, 1919. One of these proclamations has the effect of imposing the usual restrictions on persons in the municipality of Cobar. The remainder cancel existing orders in regard to the endeavour to check the spread of the disease. The areas affected are the town of Coramba, the municipal area of Tenterfield, the town of Coff's Harbour, the town of Bangalow, the city of Grafton, the municipality of South Grafton, the village of Ramornie and the shire of Gilgandra.

On July 21, 22, 23 and 25 the Commissioner of Public Health of Queensland issued orders in the *Queensland Government Gazette*, repealing previously imposed orders affecting the shire of Stanthorpe, the town of Gladstone, the shire of Noosa, the shires of Ilfracoombe, Kilkivin and Rosalie, the city of Maryborough and the shire of Isis.

The Medical Journal of Australia.

SATURDAY, AUGUST 9, 1919.

The Prevention of Disease.

The adage "Prevention is better than Cure" is gaining in significance as exact knowledge concerning the ætiology and pathology of disease is replacing the inexact conceptions of past generations of the medical profession. Since Pasteur, Lister and Koch ploughed the field, the crops have become increasingly abundant. As each harvest of fuller knowledge is gathered, it becomes more and more essential that it should be put to good use. Wastage is intolerable in all spheres of life and in all branches of activity. Wastage of health and life is its worst form. The recognition of unapplied knowledge in the sphere of preventive medicine has led to a world-wide demand for reform. In many places only vague, half-moulded ideas have been brought forward as to the nature of the requisite reform. A confusion has arisen in the mind of the public. The limited success of curative measures has suggested to those unversed in medical science that a more stringent control of medical practitioners would result in a more efficient service. Advantage has been taken by propagandists of this legimate but mistaken proposal to extend the principle of "everything for nothing." The idea of the provision of free medical attendance for the masses is a bogie and economically unsound. Even if it could be carried out in a satisfactory manner, it would merely have the effect of increasing the cost of medical attendance to the community, for should the rate-payer become responsible for payment, medical practitioners would eliminate all concessions which form a large part of medical practice under existing conditions. The introduction of a scheme to convert all medical practitioners into State-paid officials would not lead to improved curative medicine. The reverse would probably be the result. Initiative in many instances would be stifled and the impetus of competition would be removed. A real improvement can only be effected by a reform in medical education.

But while the practice of curative medicine cannot be improved by the introduction of State control, a better organization of preventive medicine should have a far-reaching effect on the health of the community. The Federal Committee of the British Medical Association in Australia has attacked this problem in a systematic and cautious manner and after mature consideration and ample consultations with the Branches, has put forward suggestions that must appeal to the sociologist seeking an improvement of the public health. How these proposals will be received by the propagandist on the political platform we do not know. Those who would bring the medical profession into a position of subserviency, will not be satisfied. Those who want a low death-rate and a low disease incidence, will welcome the proposals with alacrity. But we do know that an enlightened medical profession will recognize that much more energy must be expended by each and every member if investigation is to lead to practical results. The proposals of the Federal Committee may be summarized under three headings. Since an alteration of the constitution would be required to enable the Federal authority to take over the control of public health activities, it is necessary to have recourse to another expedient to secure uniformity of legislation and administration. The Federal Government has already been asked to lend its assistance to secure this. A study of the existing health laws in the several States is one of the steps preliminary to the reform. The co-operation and assistance of the Federal Government has been sought in order that in all parts of the Commonwealth an extension of prophylactic work may be introduced. The second part of the programme involves the allocation of responsibility for the performance of those duties which, if properly applied, may be expected to lead to a diminution of disease. The principle of placing on the local authority the obligation of carrying out its part of a general scheme is not new, but nowhere has it yet been based on a system of graded control. The first step is to secure amendment of the law, where this is found to be necessary, so that it lies within the power of the central health authority to co-ordinate the work and guarantee its performance in every district. The second step naturally consists

in the administration of the legislative provisions in a uniform manner, varied only to suit local requirements. The success of the plan of requiring each officer in the service to be responsible to the officer next on the scale must depend on the energy, ingenuity and initiative of professional head of the department. Complete success cannot be attained unless the service can be emancipated of purely political control.

The third part of the programme concerns the mass of the medical profession and is probably the most essential of the three. The Federal Committee asks the general practitioner to perform certain tasks for the health department. He possesses information of paramount importance in the application of preventive measures. His association with persons suffering from preventible diseases enables him to lend assistance essential for the discovery of the "previous case," the source of infection. Without his collaboration the task of checking the spread of disease becomes immeasurably difficult. With it, there are good prospects of success. It is not suggested that the general practitioner should become a State official. Such a step would defeat the end in view. He is to be asked to carry out some specified duties and for their performance he would receive adequate remuneration. The enlistment of the sympathy and co-operation of the general medical practitioner has been urged in these columns on many occasions as a fundamental step in any scheme for the extension of preventive medicine.

The favourable hearing which the Acting Prime Minister gave to the Chairman of the Federal Committee and his colleagues, augurs well for a new era in Australian medicine.

PELVIC DEFORMITY.

The publication in the present issue of a masterly advocacy of pubiotomy as a method of cure in certain forms of pelvic deformity by Dr. Henry Jellett, the Master of the famous obstetric Rotunda Hospital in Dublin, will cause all Australian obstetricians to review their opinions concerning the objects for which this operation should be performed and the proper treatment of flattened and general contracted pelvis. The thesis that Dr. Jellett puts forward involves a breaking away from the usually accepted doctrines in almost every particular. The problem is of great importance because the minor degrees of pelvic deformity are extremely common. Dr. Jellett throws overboard the convention that pubiotomy should be regarded as a means to terminate a particular difficult labour. To him the operation is an efficient means of removing a disability once and for all. This doctrine introduces into obstetric practice a sort of mid-way stage between preventive and curative medicine. It is freely taught that the medical practitioner should always take steps to ascertain the condition of his patient early in the pregnancy, so that when labour takes place he may be prepared to meet any emergency. When pelvic deformity is suspected as a result of digital examination, an estimate must be made of the size of the pelvic inlet and outlet. A successful obstetrician is expert in pelvimetry, while the inexperienced practitioner will be well advised if he seizes every opportunity to make himself proficient in the art of making accurate measurements. It is therefore apparent that if Dr. Jellett's doctrine is to be adopted, the practitioner attending women in their confinements must include in his routine examination an examination of the pelvic diameters in every case of suspected deformity, no matter how slight the deviation from the normal may be. His next duty would be to refer all patients with first or second degrees of contracted pelvis to an experienced obstetrician. According to Dr. Jellett's teaching, this should be done either before the woman is pregnant or early in the pregnancy. If the operation of pubiotomy is to be undertaken on a large scale, it is obvious that it must be performed under the most favourable conditions. In the opinion of Dr. Jellett the advent of localized hyperæmia during the approach of labour or after it has set in renders the conditions unfavourable. It may be questioned whether the proposal is practicable, since it would entail in the case of women living far away from the metropolitan centres a visit to the city and in many instances to a hospital. But if the future welfare of the patient depends on the performance of an operation that is relatively simple and safe in expert hands, this difficulty can no doubt be overcome. It should be emphasized that the safety

of the operation and its ultimate success will depend on the facility with which it is performed. Unless a practitioner has opportunities for carrying it out frequently, he should not subject his patient to risk of failure, but should ask his more experienced colleague to carry out the operation. There is a further reason why women with minor degrees of deformity affecting the pelvic inlet should be referred to the experienced obstetrician. The adoption of Dr. Jellett's application of pubiotomy as a curative procedure for pelvic deformity or its refusal must remain in the hands of specialists. Dr. Jellett speaks with authority because of his eminence as an obstetrician and because he has an immense experience. The value of pubiotomy as a curative operation can only be assessed by one who has facilities for observing a large number of labours in women with contracted pelves.

There is a further aspect of the doctrine that should be put forward. It has been noted that pelvic deformity occurs with particular frequency in certain families. Without entering upon the question of the ætiology of rickets and other causes of pelvic deformity, it should be pointed out that the question may be raised whether an extensive application of this operation would increase the frequency of pelvic deformity. The danger, however, does not appear to be very real. It is regarded as hygienically sound to advocate celibacy for mental defective, for persons suffering from tuberculosis and temporarily for persons with veneral infections. The object, in part at all events, of this deliberate step to prevent the propagation of these families is to free humanity of these devastating conditions. The disabilities accruing from pelvic deformity could scarcely be regarded in the same light. On the other hand, if the wholesale performance of pubiotomy led to the birth of an increased number of living female infants who were destined to suffer from the same disability in later life, it would be necessary to gauge the significance of the vicious circle produced by the means adopted to combat the deformity in the individual case.

The proposal put forward by Dr. Jellett appears to be worthy of serious consideration and experimental adoption.

CONDITIONS OF RESPIRATION.

The term dyspnœa is applied to all conditions of breathing accompanied by discomfort. Sometimes there may be obstruction to the flow of the air, but more often there is no mechanical obstacle to the ingress of air. In those conditions of dyspnœa which are not caused by obstruction, there is always an increased amount of respiration. It has been frequently noted that there may be some degree of hyperpnœa without any distress. Such states of increased respiration may not cause any discomfort and may not lead to dyspnœa. The investigation of these conditions of hyperpnœa has been undertaken for some years in the hope that they might shed light on the ætiology of dyspnœa. Physicians have often recorded their experience of the failure of inhalations of oxygen to relieve respiratory distress. Physiologists have established proof of the fact that an accumulation of carbon dioxide in the pulmonary alveoli may lead to dyspnœa. Evidence has been advanced to show that changes in the blood without any considerable alteration in the tension of the alveolar carbon dioxide, may necessitate a greatly increased pulmonary respiration to provide for the elimination of gaseous products of metabolism.

In the early investigations of respiration under different circumstances it was usual to note the number of the respirations in a given time and to record roughly the depth of the breathing. Later it was held to be sufficient to record the pulmonary ventilation or the amount of air passing through the lungs in a minute or an hour. It is now recognized that a measurement of the pulmonary ventilation does not give sufficient information for comparative purposes. In rapid, shallow breathing the pulmonary ventilation may be high, but it may be less effective than a less degree of ventilation, since much of the air simply passes into the dead space of the mouth, trachea and bronchi. The existence of this dead space makes it impossible to rely on measurements of the pulmonary ventilation for comparing the efficiency of respiration at different times. It is necessary to measure the ventilation of that part of the lungs concerned with the interchange of gases. This is sometimes spoken of as the alveolar ventilation. The alveolar ventilation has been calculated from the percentage of carbon dioxide in the expired air and in the alveolar air. In practice it has been found useful to note for different purposes the pulmonary ventilation, the alveolar ventilation, the tidal air and the alveolar tidal air or volume of air leaving the alveoli at each breath.

Before these measurements can be employed in the elucidation of diseased states data are needed as to their range in normal persons. The number of studies of normal individuals is scanty and we may welcome the results[1] of a careful study of the respiration of ten normal men at rest in bed by L. S. Debenham and E. P. Poulton. These persons were all male patients in bed in surgical or ophthalmic wards of Guy's Hospital, London. They had been lying in bed for some days before the observations were made. The pulmonary ventilation, percentage of alveolar carbon dioxide, alveolar ventilation, tidal air, dead space and

[1] *Quarterly Journal of Medicine*, Vol. XII., p. 38, October, 1918.

respiratory exchange have been estimated by appropriate means. The Douglas bag was employed to collect the expired air during five consecutive minutes. The percentage of carbon dioxide in the alveolar expired air was estimated by the methods of Haldane and of Hasselbalch and Lindhard. The respiratory exchange was calculated from the results of the analysis of the contents of the Douglas bag.

The authors have found a mean value of 6 litres per minute for pulmonary ventilation, the figures being evenly distributed between 4.8 litres and 7.6 litres. The tidal air lies between 320 c.cm. and 524 c.cm.. The alveolar ventilation varies from 3 litres to 5.5 litres per minute. The percentages of alveolar carbon dioxide range from 4.8% to 6.4%. The authors have calculated the dead spaces to lie between 87.7 c.cm. and 105.4 c.cm.. In obtaining these results the authors have relied on the results of the determinations of the tension of the carbon dioxide in the alveolar air by the method of Hasselbalch and Lindhard. In this method the samples of the expired air are collected in small quantities through a capillary tube held just below the nostrils. About one cubic centimetre is taken at the end of each of a succession of respirations until sufficient air is collected for an analysis. The authors used this method owing to the failure of the duplicates by Haldane's method to agree together. This disagreement is ascribed to the difficulty experienced by the subject in expiring forcibly immediately at the end of inspiration or in avoiding a previous deep inspiration.

In addition to these observations the authors studied the dissociation of oxyhæmoglobin in the blood of the same ten individuals. They have measured the tension of oxygen and carbon dioxide in the blood and the percentage to which the blood was saturated with oxygen. They have also determined the value of the acidity figure for each sample of blood. Some curves have been drawn to reveal the "buffer" value of the blood in respect to changes in acidity produced by the addition of acid and alkali.

The accumulation of data of this kind provides material for the investigation of the respiration of patients suffering from dyspnœa. With their aid we may hope in time to devise remedies which may relieve the distress due to different causes.

VOMITING IN PREGNANCY.

Although much has been written on the subject of pernicious vomiting of pregnancy, the information concerning the metabolic changes in this condition is very sparce. It is stated by certain observers that the vomiting is a sign of acidosis, but notwithstanding the ingenious work of Losee and van Slyke and of many other bio-chemists, the definition and mechanism of acidosis is extremely vague. Dr. W. Gilliatt and Dr. E. L. Kennaway have seized the opportunity of investigating three cases of vomiting in pregnancy and of analysing their findings in the light of the data collected by other observers.[1] They have directed their attention primarily on the so-called ammonia index, by which is meant the amount of ammonia nitrogen in the urine expressed as a percentage of the total nitrogen. It is found that the ammonia index rises only after the vomiting has been present for some time and that the raised index is associated with a high acetone and aceto-acetic acid content. The question is discussed whether the changes are due to the starvation resulting from the inability of the patient to retain food. The authors draw a comparison between the recorded cases of pernicious vomiting of pregnancy and those of starvation. In simple starvation the ammonia index, as measured by Folin and Denis, Benedict and Bönniger and Mohr, does not reach a high level. The total amount of aceto-acetic acid and β-oxybutryic acid excreted runs roughly parallel to the ammonia nitrogen. On the other hand they find that there are apparent differences between the changes in the urine of women suffering from the vomiting of pregnancy and in that of persons undergoing starvation. In the former there is an abrupt change after a latent period. Underhill and Rand have suggested that the large increase in ammonia nitrogen is explained by the assumption of the disappearance of glycogen. The authors fail to recognize any evidence of a disappearance of glycogen. There is not sufficient information available at present to determine the direction in which the acid-base equilibrium of the body is disturbed in fasting and in the vomiting of pregnancy. Sellards in recording a case of the latter condition pointed out that the ammonia index was high, while the output of abnormal acids was not large and the tolerance to sodium bicarbonate was normal. In referring to the condition in diabetes, Sellards arrived at the conclusion that in the vomiting of pregnancy there was a primary disturbance of protein metabolism, with the formation of abnormal amounts of ammonia. This means that it would be an alkalosis and not an acidosis. Drs. Gilliatt and Kennaway, however, are not prepared to endorse this view. It has been shown that after the administration of large quantities of hydrochloric acid, the carbon dioxide tension of the venous blood is scarcely raised, while the acidity of the urine and the ammonia index rise almost proportionally (Begun, Harmann and Münzer). Hasselbalch, as the result of careful studies of the hydrogen-ion concentration and the ammonia index, arrived at the conclusion that when an excessive accumulation of acid threatens to lead to demineralization, the ammonia regulation has to bear the brunt of the attack and only when the resistance offered by this regulation is overcome, is the sodium reserve encroached on. It would seem, therefore, that in persisting vomiting in pregnancy, the primary effect acts on the acetone bodies which accumulate in the tissues. The acidosis thus produced does not influence the sodium alkali reserve until the ammonia is largely used up. It is noted that the termination of the pregnancy leads to a sudden and steep fall in the ammonia index, indicating the removal of the primary acidosis.

[1] *Quarterly Journal of Medicine*, Vol. XII., Nos. 45 and 46, October, 1918, and January, 1919.

SUGAR TOLERANCE IN CANCER.

The facts concerning malignant disease are apparently difficult to collect. Notwithstanding the establishment of cancer research institutes and a relatively

large army of investigators who have devoted years in the search for the essential facts of the pathology of the disease or diseases, the number of theories put forward far exceed the number of facts that have been elicited up to the present. Several observers have turned their attention to the consideration of the endocrine glands in malignant disease in the hope that some constant lesion or peculiarity might be discovered. This search has been unfruitful. Mice with spontaneous tumours have been carefully examined, but no trace of a peculiar histological appearance of the various endocrine glands has been found. Nor has the exhibition of these glands on the one hand or their extirpation on the other influenced the rate of growth of the mammary tumours of mice or their ascertained characteristics. It is useful to have negative as well as positive records. The failure to discover some histological change, however, does not exclude the presence of a chemical or physico-chemical change. In order to take the investigation further, Dr. G. L. Rohdenburg, with the collaboration of Drs. A. Bernhard and O. Krehbiel, has tested the response of the organism to injections of 100 grammes of anhydrous glucose.[1] The sugar content of the blood was determined by Meyer's modification of the method devised by Lewis and Benedict, while the urinary sugar was measured by Benedict's method. In a limited series of cases it was found that the blood in cancer patients contains approximately 100 milligrammes of sugar per 100 c.cm.. Within 45 minutes of the ingestion the blood is found to contain from 180 mgrs. to 200 mgrs. per 100 c.cm.. At the end of two hours the sugar content is found to be still higher, in one instance reaching 350 mgrs.. At the end of three or four hours the sugar content of the blood returns to its original level. In diabetes and in thrombo-angiitis obliterans, the permanent level of the blood sugar is higher than in cancer, while the return to this original level takes place much earlier. In persons suffering from exophthalmic goître and in normal persons the premanent level of the blood sugar content is low and the rise in response to the intake of glucose is short-lived. The authors have set up a curve of the blood sugar content in cancer. As plotted from their estimations these curves appear to have a definite character which differentiates them from the blood sugar curves in other conditions. They refrain from suggesting any particular significance of the finding, but give instances in which the typical curve might be of diagnostic value. In so important a disease a reliable diagnostic sign would be of immense value. The results of observations by other investigators will be watched with interest.

The tragic death of Dr. James Charles Robert Lind, Acting Medical Superintendent of the Parkside Mental Hospital, which occurred on July 26, 1919, has occasioned wide-spread regret. During the absence of Dr. Downey, the Medical Superintendent of the Asylum, Dr. Lind carried the great responsibility of the institution most conscientiously and spent himself in the interests of his patients and of the community. He was subjected to much additional annoyance by a series of inquests where were held by the City Coroner into the causes of death of asylum patients. While Dr. Lind had no difficulty in any case in demonstrating that his treatment of patients and his control of the institution were efficient, the necessity of having to explain his conduct of the Hospital on repeated occasions rendered the strain of his office extremely great. On the evening of July 25, his wife found him in the bath-room at the Pier Hotel, Glenelg, where they were staying. He was unconscious and, despite the endeavours of Dr. Dawson and Dr. Dawes, he died early on the following day. It transpired that death was caused by an overdose of morphine. An inquest was held and the Coroner found that the deceased had died from an overdose of morphine and atropine, self administered, "he being at the time not responsible for his actions." Dr. Dawson and Dr. Dawes have publicly protested against the phrasing of the verdict, as nothing that they knew "of the circumstances of his death refutes the possibility of the overdose of morphine having been taken accidentally by a man seeking relief from mental distress and worry." Profound sympathy is felt for his distressed widow and four young children.

[1] *Journal of the American Medical Association*, May 24, 1919.

It is with regret that we have to record the death of Dr. Sampson John Rodger Greville, of Albert Park, Victoria, which took place on July 23, 1919.

We regret to record the death of Dr. Edmund Digges La Touche, of Mansfield, Victoria.

We regret to record the death of Dr. Charles Wynwood Bray, Quarantine Officer at Port Darwin in the Northern Territory.

VENEREAL DISEASES ACT OF NEW SOUTH WALES.

A proclamation has been published in the *New South Wales Government Gazette* of July 31, 1919, revoking a previous proclamation fixing August 1, 1919, as the date on which the *Venereal Diseases Act, 1918*, should come into operation. The proclamation further determines that this *Act* shall come into operation generally throughout New South Wales on January 1, 1920.

Dr. B. T. Zwar has been appointed Honorary Surgeon to the Melbourne Hospital, filling the vacancy created by the retirement of Mr. G. A. Syme.

At the St. Vincent's Hospital, Melbourne, Drs. H. J. Williams, H. B. Lee and T. P. Noonan have been appointed Physicians to out-patients, while Dr. G. O'Day and Dr. F. E. McAree have been appointed Acting Physicians to out-patients for a period of twelve months.

It is proposed to form an association of returned medical officers in New South Wales. The object of this movement is to further the interests and the spirit of camaraderie of members who have served overseas.

The undersigned, acting as conveners of an inaugural meeting, to be held at the B.M.A. Library, 30-34 Elizabeth Street, Sydney, on August 13, 1919, at 8.30 p.m., invite all returned medical officers of the Royal Australian Navy, Australian Army Medical Corps, Royal Army Medical Corps and Naval and Military Expeditionary Forces who are interested in the formation of this association, to attend the meeting.

It is suggested that, if those attending the meeting determine to establish the association, they will proceed to elect the office-bearers and to set forth the objects for which the association is founded.

ARCHIE. J. ASPINALL
C. BICKERTON BLACKBURN
R. GORDON CRAIG
R. I. FURBER
A. E. MILLS
H. R. G. POATE
W. VICKERS
C. E. WASSALL
} Conveners.

The Minister for Repatriation has appointed Sir Henry Maudsley, K.C.M.G., Mr. G. A. Syme, Dr. J. Ramsay Webb and Dr. R. R. Stawell to be a Medical Advisory Committee to the Department of Repatriation.

Abstracts from Current Medical Literature.

PATHOLOGY.

(44) Life of Transfused Blood Corpuscles.

W. Ashby has devised a new method for estimating the length of the life of transfused erythrocytes (*Journ. Exper. Medicine*, March, 1919). Earlier investigators have injected nucleated blood corpuscles from birds or frogs and have noted the period in which they disappeared from the blood stream or they have stained the corpuscles before introducing them into the body. These methods have no bearing on the length of life of living red corpuscles of the same species after transfusion into another individual. In man there are four groups of blood, the classification being based on the ability of the serum of one group to agglutinate the corpuscles of another group. Bloods in group I. exhibit no agglutinative power in the serum, though the corpuscles are agglutinated by sera of any of the other groups. The sera of groups II. and III. mutually agglutinate each other's corpuscles. The corpuscles of Group IV. are not agglutinated, but the serum agglutinates all other corpuscles. Transfusions of blood of persons of group IV. into persons of groups I., II. and III. have been done commonly in the Mayo Clinic. The agglutination is complete if sufficient serum is used, but unagglutinable corpuscles are not included in the clumps. In a counting cell the number of free corpuscles can be estimated. The amount of blood transfused is not, as a rule, sufficient to lead to the introduction of sufficient serum to produce agglutination in the circulating blood. The author has worked out a method which gave sufficiently accurate results *in vitro* for the estimation of the proportion of the mixed bloods. She has then applied this method to patients who have been transfused. By treating samples of the patient's blood with suitable sera which will agglutinate the corpuscles of the patient, but not those of the transfused blood, it has been possible to estimate the proportion of the transfused red corpuscles. The results of these experiments show that the life of the transfused corpuscle extends to 30 days or more. It would thus appear that the beneficial results of transfusion are not primarily due to stimulation of the bone marrow. Rather it would seem that the transfused erythrocytes assume the functions of the lost corpuscles of the patient. Full accounts are given of the results obtained in a considerable series of transfused patients.

(45) Changes in the Intestinal Flora Resulting from Changes in Diet.

J. C. Torrey has investigated the changes in the intestinal flora of dogs as the result of changes in the diet (*Journ. Med. Research*, January, 1919). Dogs were chosen because the intestinal flora closely resembles that of human adults. Under normal physiological conditions the fundamental factor controlling the types of bacteria vegetating in the intestinal tract is the chemical character of the food ingested. Secondary controlling factors of almost equal weight are the rate and degree of digestion and absorption of the food and the character of the end-products of the digestive process. It has been demonstrated that not all carbohydrates have an equal tendency to establish a purely fermentative intestinal flora and, on the other hand, not all protein foods encourage putrefactive conditions in a like degree. Lactose and dextrose caused such a marked development of aciduric bacteria of the *B. acidophilus* type that they completely dominated the fæcal flora and effected the almost complete disappearance of proteolytic types. A bread and milk diet, which of course contains lactose and dextrin, had the same effect. With other carbohydates, saccharose, maltose and glucose, this transformation did not occur or was far less striking. Various proteins were found to differ radically in their effects upon the intestinal flora. The proteins of mammalian tissues were the only ones which markedly encouraged the growth and activity of the putrefactive bacteria within the intestinal tract. Fish produced an entirely different flora. Casein exhibited far less tendency than did meat protein to give rise to intestinal putrefaction. Vegetable proteins did not offer the slightest encouragement to the growth of intestinal putrefactive types of bacteria. Fat as an element in the diet seemed to play no part in determining the development of bacterial types within the intestine.

(46) Diphtheroids in Wounds.

R. M. Janes and N. O. Thomas have examined a number of open wounds for the presence of diphtheroid organisms (*Canadian Med. Assoc. Journ.*, May, 1919). In 129 cases they found diphtheroid organisms in 63.5%. Of the organisms isolated 10% were true *B. diphtheriæ*, i.e., in 6.4% of the wounds were found *B. diphtheriæ*. The wounds infected with diphtheroids differed in no wise clinically from those from which true *B. diphtheriæ* were obtained. Membranes were found in both types of cases, so that a membrane does not necessarily indicate the presence of *B. diphtheriæ* in wounds. It is not possible to distinguish between diphtheria bacilli and wound diphtheroids by morphological characters. Only by sugar reactions obtained by pure cultures can diphtheroid organisms be distinguished from true Klebs-Loeffler and only after positive animal inoculation is it advisable to diagnose diphtheria in wounds.

(47) Endocarditis Following Pneumococcus Injections in Horses.

A. B. Wadsworth found during the immunization of horses with living virulent pneumococci that a number of them developed endocarditis (*Journ. Med. Research*, January, 1919). These lesions are intimately associated with injury of the blood vessels due to the action of the pneumococcus poisons and are thus infective processes in which the bacterial development may be evanescent and promptly followed by complete resolution or reparative processes with scar tissue or the bacterial process may persist inciting varying degress of inflammatory reaction and necrosis before the bacteria are destroyed. All stages of these lesions were found in the heart valves, including petechial and larger hæmorrhages with and without inflammatory reaction and larger and smaller areas of necrosis in which pneumococci were present in large or small numbers or absent altogether, all in various stages of development, resolution and repair. These lesions correspond to those of acute and chronic endocarditis in man. The anatomical changes of the ulcerative or vegetative and the sclerosed lesions in man are all to be found in these lesions of the horse. It is, therefore, not necessary to assume that the chronic lesions of endocarditis in man, however slight or marked, or however free from bacterial activity, have not been originally infective processes.

(48) Effect of Bile on the Clotting Time of Blood.

H. Haessler and M. G. Stebbins have studied the effect of bile on the clotting time of blood (*Journ. Exper. Medicine*, May, 1919). Although it is known that jaundice tends to cause delayed clotting of blood, the cause of the delay is not known. In order to investigate the question, the authors prepared an oxalate plasma and to each of the series of tubes was added 2 c.cm. of plasma and 0.5 c.cm. of ox-bile of varying concentration. To each tube was added an amount of calcium chloride which had previously been found to produce a firm clot in the minimum time. The time necessary for the formation of a firm clot in each tube was recorded. It was found that clotting time was delayed in proportion to the amount of bile present in the plasma. Similar experiments were performed with fibrinogen solutions and thrombin with bile and sodium glycocholate and similar results were obtained. From their results the authors conclude that the conversion of fibrogen to fibrin is interfered with rather than the formation of thrombin. It seems possible for bile salts to be present in sufficient concentration in the blood to prevent coagulation in jaundice.

(49) Fate of Injected Typhoid Bacilli in Normal and Immune Animals.

J. T. Parker and E. Franke have investigated the fate of typhoid bacilli injected intravenously into normal and typhoid immune rabbits (*Journ. Med. Research*, January, 1919). Both in normal and immune rabbits the bacteria are taken up and killed in the organs with extraordinary speed. The liver, because of its relatively large weight and because of its ability to take up more bacteria per gramme than any other organ, must play the principal part in this destruction. No constant difference in the killing of bacteria could be demonstrated in normal and immune rabbits.

PÆDIATRICS.

(50) Auto-Serum Treatment of Chorea.

Recent researches on the bacteriology of chorea have resulted in the repeated finding of a micro-organism either in the blood or in the tissues of the central nervous system. The organism most frequently found is a coccus belonging to the general streptococcus group. During the past three years many positive streptococcus cultures have been obtained in cases of chorea from the teeth and tonsils, while blood cultures have been usually negative. These septic foci have in many instances undoubtedly been the source of the infection, but unfortunately their eradication does not necessarily effect a cure. A large number of observers believe chorea to be a manifestation of rheumatic fever, the central nervous system being attacked directly by bacteria or affected by their toxins. Again, others believe the disease to be always a manifestation of infection, usually of rheumatic infection. Others, again, believe it to be a functional disturbance, due to a variety of causes. The view is gaining ground that chorea does not represent a functional disturbance of the central nervous system, but that it is characterized by organic lesions of the brain, which while only temporary, are none the less actually present. Loubet concludes that the lesion is a mild encephalitis caused by the toxins absorbed from an infection without the actual presence of organisms in the tissues of the nervous system. In view of the fact that chorea is generally recognized as a bacterial disease due to a streptococcus of the viridans group, certain antibodies must be in the circulating blood plasma. These antibodies do not enter the cerebro-spinal fluid on account of the choroid plexus, which does not permit their transmission into the spinal canal. When serum is injected into the canal, a certain chemiotactic action takes place and the walls of the choroid plexus again become permeable. Working on this theory Brown, Smith and Phillips (*British Journ. of Children's Dis.*, January-March, 1919) treated a series of 23 children by the injection of an auto-serum into the spinal canal. Both syphilis and tuberculosis had to be excluded and all drug therapy suspended for at least 5 days previous to injection, as serious reactions were obtained, especially with salicylates. Treatment was usually administered in the out-patient department, serum being separated, warmed and injected about 2 hours after the withdrawal of the blood. The injection was made under an anæsthetic, 20-25 c.cm. of spinal fluid being withdrawn and an average of 17 c.cm. of serum injected. No force was used. Two hours later the patients returned home. Following injection, a slight rise of temperature, stiffness of the neck or increase in the pulse-rate occurred in some cases. No solid food was given for 6 to 8 hours after injection. The report reveals that of 23 patients observed over a period of almost 18 months, 77% were cured, 19% improved. Only one patient remained unimproved; this patient refused further treatment on account of a severe reaction. Of the 23 cases, 17 were of mild degree and 5 were severe. In 4 cases the duration of the disease was over a year, while the remainder the symptoms lasted on an average for 6½ weeks. The average number of injections was three, but several patients were given one injection, while in one instance 5 were administered before a cure was effected. The average amount of serum used was 17 c.cm.. Nineteen cases were cured in 3 weeks and 4 were cured within one week. All the severe cases required more than one injection at varying intervals, usually about 7 days.

(51) Nephritis in Children.

Nephritis is a common condition in children and Hill (*Amer. Journ of Dis. of Children*, April, 1919) has made a clinical study of 75 cases of both acute and chronic nephritis. He prefers a simple clinical classification into (*i.*) acute hæmorrhagic, with much bloody urine; (*ii.*) acute "exudative," so-called because of the occurrence of œdema; (*iii.*) subacute, not common, usually following the acute hæmorrhagic type and occasionally progressing into a chronic nephritis; (*iv.*) chronic nephritis of varying degree, usually mild with few symptoms, or more severe and resembling the adult type of the disease; (*v.*) the rare condition "chronic nephritis with infantilism." As regards ætiology he considers that the majority of cases of nephritis in children are secondary to some acute infection, particularly tonsillitis, and that it is always wise before discharging a patient to examine the urine. One of the most striking things noted in the general condition in the acute cases was that many of the patients did not seem very ill. Only 8 out of 49 patients with acute nephritis were dangerously ill. Of the chronic types of disease, 13 were far advanced, the rest were mild and nephritis would not have been suspected without a urine examination. Œdema was present in 25 of the 49 acute cases in varying degree and in 17 of the 25 subacute and chronic cases. Blood pressure changes were not nearly so important nor so constant in children as in adults, except in cases of chronic nephritis with infantilism. Moderate cardiac dilatation was found in certain cases of acute nephritis during the most severe stage, but in nearly all the other cases there was not enough cardiac hypertrophy or dilatation to be detected clinically. Functional tests were found to be of little value in acute nephritis, but in chronic cases they were of considerable value, for the purpose of determining how severe the damage was and of deciding the status of the child as regards prognosis. Repeatedly low functional tests probably would mean a severely damaged kidney with a bad prognosis. For treatment the general principle was to spare the kidneys and to prevent the accumulation of waste-products in the blood and tissues. In all cases with œdema there is salt retention and therefore patients with œdema should have a salt-free diet. A large amount of water should be given if the patient could handle it, so as to dilute and eliminate toxins, especially in the hæmorrhagic type of the disease. Two thirds as much water should be excreted as taken in. As much fatty and carbohydrate food should be given as is wanted by the patient, with enough protein to cover the nitrogen needs. Too great a restriction on the protein intake should not be made, especially in the chronic cases in which the general condition should be watched and the protein diet regulated. Diuretics should be used only in severe cases of chronic nephritis with œdema. Of 3 cases in which decapsulation of the kidneys was performed, four were unaffected, in one acute case life was saved, one chronic case benefited and in one acute and one chronic case life was undoubtedly saved and the condition apparently cured. Prognosis in general in acute nephritis is good, the usual duration being from 6 to 12 weeks. In many of the acute cases the patients recover and do not pass into the chronic form of the disease. In chronic cases the most obscure prognosis is connected with the mild forms with normal functional tests and few urinary changes. It is held that recovery takes place in these cases. With low functional tests a more severe and progressive chronic nephritis is likely to develope. In the severe chronic cases with anæmia much œdema, low functional tests and large amounts of albumin in the urine, the patients rarely live over 3 to 4 years and usually die before this time.

(52) Masking in Influenza.

With a view to the prevention of the spread of influenza in a school with an attendance of 120 children, aged 4½ to 14 years, it was decided to request parents to furnish each child with a mask made of 6 thicknesses of gauze, 10 to 15 cm., sewed together with tapes 25 cm. long at each corner. The masks were worn continuously during school hours and the following results were noted and reported by Barnett (*Arch. of Pediatrics*, February, 1919). (1) After the second hour the children became restless. (2) The quality of their work diminished. (3) The masks became wet and soiled and would not stay in place. (4) Children, wearing glasses, could not keep the mask over the nose because the lenses became clouded. (5) The number of reprimands for bad behaviour increased. (6) Each day the children started their work well, but irritability and restlessness developed after an hour and became worse as the week progressed. At the end of a week it was found that the work done was only a fraction of the normal; the children were listless and did not concentrate well and the general conduct was deteriorating. A few cases of influenza developed. This seemed to prove that masks were of doubtful value and accordingly they were used only where a child was found coughing and sneezing.

British Medical Association News.

MEDICO-POLITICAL.

Meeting of the Federal Committee.

The Federal Committee of the British Medical Association in Australia met at the Melbourne Hospital on July 29 and 30, 1919. There were present Dr. R. H. Todd and Dr. F. P. Sandes, representing the New South Wales Branch, Dr. J. Lockhart Gibson and Dr. J. Espie Dods, D.S.O., M.C., representing the Queensland Branch, Dr. W. T. Hayward, C.M.G., and Dr. F. S. Hone, representing the South Australian Branch, Mr. G. A. Syme and Dr. R. H. J. Fetherston, representing the Victorian Branch. Apologies for non-attendance were received from Dr. E. Brettingham Moore and Dr. W. W. Giblin, C.B., V.D., the representatives of the Tasmanian Branch, and from Dr. W. P. Seed and Dr. F. A. Hadley, the representatives of the Western Australian Branch.

On the motion of Mr. G. A. Syme, seconded by Dr. J. Lockhart Gibson, Dr. Hayward was elected to the chair. On the motion of Dr. J. Espie Dods, seconded by Dr. F. P. Sandes, Mr. G. A. Syme was elected Vice-chairman. On the motion of Dr. J. Lockhart Gibson, seconded by Dr. R. H. J. Fetherston, Dr. F. P. Sandes was appointed Honorary Secretary and Honorary Treasurer and Dr. R. H. Todd was appointed Corresponding Secretary. On the motion of Dr. F. P. Sandes, seconded by Mr. G. A. Syme, Dr. W. H. Crago was appointed Honorary Auditor.

The thanks of the Committee were accorded to Dr. W. H. Crago for having acted as Honorary Auditor.

Before the formal business of the meeting was entered upon, the Chairman referred in sympathetic terms to the absence, due to illness, of Dr. W. N. Robertson. He expressed, in the name of the Committee, the hope that he would soon be restored to health.

It was unanimously decided that a letter of condolence be addressed to Mrs. Magarey on the loss of her husband, who had been a member of the Committee representing South Australia in 1917.

Dr. Hayward moved from the chair that letters of congratulation be sent to Sir Henry C. Maudsley, to Sir Charles Ryan and to Sir Joseph Verco, who had received the honour of knighthood since the last meeting of the Committee.

The Chairman announced that Dr. J. H. L. Cumpston, the Director of Quarantine, had issued an invitation to the members of the Federal Committee to visit the Commonwealth Serum Laboratories.

Financial Statement.

Dr. F. P. Sandes, the Honorary Treasurer, presented the financial statement and balance sheet for the year ending June 30, 1919.

Medical Ethics.

The ethical code previously adopted by the Committee, was considered at the request of the Western Australian Branch and an amendment introduced. The words "medical practitioners" were substituted for the words "so-called consultants and specialists" in Note 1. The amended clause is as follows:—

> It is unethical . . . . to attend professionally a patient under the care of another legally qualified practitioner, except in consultation or as a substitute in cases of emergency or other special circumstances or when the attending practitioner has relinquished the case or been dismissed in due form.
>
> Note 1.—It is customary both in Great Britain and Australasia for medical practitioners to see at their consulting rooms any patients who desire their opinion and such practice is not generally considered unethical, notwithstanding the fact that when such patients, as is usually the case, are known to be under the care of another medical attendant, such practice is not in conformity with principle 11.

Extension of the Public Health Services.

The Honorary Secretary reported that in response to the request embodied in a resolution of the Federal Committee passed on August 7, 1918, all the Branches of the Association in Australia had forwarded a reply. A summary of the replies had been drafted and was presented, with a view of economizing the time of the Committee. A general discussion ensued concerning the scope of the original resolution. It was held that the Federal Committee would consider proposals for a national medical service, provided that the schemes put forward were not inconsistent with the amended pronouncement on the subject, as adopted by the Federal Committee on February 7, 1918 (see *The Medical Journal of Australia*, May 12, 1917, page 409, and March 2, 1918, page 181). It was recognized that no proposal would be in order which would involve any third party intervention between medical practitioners and their patients.

It was moved by Dr. F. P. Sandes and seconded by Dr. F. S. Hone:—

> That the Federal Committee is of opinion that an extension of national medical service would be of value in public health affairs.

In the reports from the Branches it was set out that there should be a better education of the public, in regard to the importance of public health administration. Among the improvements suggested by the various Branches were better health administration in cities and outlying districts, more competent and better paid *personnel*, the appointment of a district medical officer, of a large number of whole-time and part-time medical officers and of well-trained sanitary experts, the co-operation of health societies, the formation of special clinics in the different districts and the utilization of general practitioners in preventive work.

Mr. Syme pointed out that the extension of the work should be limited to the public health service and the demand for it should be more forcible. He therefore moved as an amendment:—

> That the Federal Committee is of opinion that an extension of the public health service is not only desirable but urgently required.

Dr. Sandes, with the concurrence of the seconder, withdrew his motion in favour of the amendment.

The amendment was carried and was adopted as a substantive resolution.

Mr. G. A. Syme raised the question whether the extension should be by the Federal or by the State authorities or by both. He recognized that the Federal authorities were not at present able to take over the duties of health administration, without an amendment of the constitution. On the other hand, he was of opinion that all the State enactments required revision. He therefore moved:—

> That the administration of health affairs should be retained by the State for the present, with the co-operation of the Federal authorities.

Dr. F. S. Hone understood that this matter had been thoroughly discussed at the Conference of Premiers. Finality had not been reached during this discussion. He held that a closer co-operation should be established between the Federal and the State Health Departments. He pointed out that the co-operation which had been effected in the United States by the establishment of the Federal Health Service had demonstrated the value of such a measure. He was prepared to accept as a fundamental principle the suggestions made in the reports of the New South Wales and the Victorian Branches.

Dr. R. H. Todd stated that it was impracticable at present to advocate a transfer of control to the Federal Government. Dr. Hone moved as an amendment:—

> That in the opinion of the Federal Committee, such extension should at present be undertaken by the State Governments, with the close co-operation and assistance of the Federal Government.

The amendment was carried.

Dr. R. H. Todd moved:—

> That it be a suggestion to the Commonwealth authorities to make a comparative study of the health legislation of the States and approach the State Governments, with a view to uniformity of legislation being established throughout the Commonwealth, as far as may be possible.

Dr. Sandes seconded the motion, which received the support of the members and was carried.

A general discussion ensued concerning the advisability of requiring the health authorities to make special provision for research. It was moved by Mr. G. A. Syme and seconded by Dr. R. H. Todd:—

> That in the opinion of the Federal Committee, a funda-

mental requirement in this extension of the public health service, is the establishment of adequate facilities for scientific medical research.

The motion was carried after a short discussion.

Dr. R. H. Todd pointed out that the New South Wales Branch Council had considered with great care the final report of the Departmental Committee appointed by the Minister of Trade and Customs to enquire into the causes of death and invalidity. In this report there was set out under the heading of "The Allocation of Responsibility" an ideal scheme for the organization of a State public health service. The Council had approved of the scheme. He pointed out that the *New South Wales Public Health Act, 1902*, contained provisions for the greater part of this scheme. The *Act* had been drafted with extreme care and was in advance of any other legislation that had been adopted in the Commonwealth. He thought that the scheme would be acceptable to all present. He therefore moved that the approval of the Committee be given to this portion of the final report of the Departmental Committee.

Dr. Sandes seconded the motion, but in the course of the discussion which followed, it was urged that the Committee should not endorse the whole of that section of the report, but should confine itself to certain definite proposals contained therein. Dr. Hone thought that the slight differences of opinion might be met by the insertion of the words "in principle" and Dr. Todd offered no objection. Mr. G. A. Syme, however, asked the Committee to be a little more specific and moved the following amendment, which was seconded by Dr. Hone and was carried:—

That the Federal Committee approves of a scheme for the departmental organization of the State public health service to provide:—

(*i.*) For a central health authority and local authorities.

(*ii.*) For the States to be divided into districts under the supervision of a whole-time district inspector.

(*iii.*) For the council of each municipality or other local authorities to be the unit of health administration.

(*iv.*) For each municipal council or combination of councils to have its own whole-time medical officer of health.

Dr. Hone suggested that the Federal Committee should urge upon the Federal Government the necessity of the extension of laboratory facilities for general practitioners. He pointed out that in modern practice the laboratory was a necessity and that the health departments should make available the provisions for bacteriological and other clinical pathological work in the diagnosis of disease. Dr. R. H. J. Fetherston raised the question as to whether the laboratory facilities should be at the disposal of the practitioner or whether the work should be carried out for him. A general discussion ensued concerning the existing facilities for clinical laboratory work. In both Sydney and Melbourne a number of practitioners carried out this work in connexion with their own practice, while others confined their practice exclusively to it on behalf of the profession. There was a general concurrence of opinion that practically no facilities existed for the performance of this work in the outlying country districts. It was held that the whole-time health inspectors might undertake the work at the request of the local practitioners. Dr. Todd was emphatic on the point that the Committee should tolerate the State to do the work only as long as it was necessary, and that every encouragement should be given to medical practitioners who specialized in this direction.

Mr. G. A. Syme moved:—

That in each health district provision should be made for a bacteriological and sanitary unit with a competent medical officer, which might in some cases be a mobile unit.

Dr. F. S. Hone seconded the motion.

Dr. R. H. Todd moved as an amendment and Dr. F. P. Sandes seconded:—

That it be a suggestion to the Federal health authorities that facilities be established for bacteriological and sanitary work to be done under a competent medical officer, when necessary, in connexion with notifiable diseases.

Dr. Todd pointed out that this would limit in principle the State participation to the legitimate sphere of public health activity.

Dr. Hone, however, thought that the term "notifiable diseases" was too restricted and Dr. Fetherston pointed out that in the several States there was considerable variation in regard to which diseases were notifiable. Dr. Todd's amendment was put to the meeting and was negatived. Mr. Syme's motion was then put to the meeting and was carried.

Mr. G. A. Syme dealt with the question of the medical inspection of school children and the control of school hygiene and made reference to the direction in which the school medical service should be extended and improved. He moved:—

That in the opinion of the Federal Committee the system of medical inspection of school children and school premises should be extended, but that the education authority should not establish a service of treatment.

Dr. F. S. Hone seconded the motion. It was pointed out that in New South Wales there were several medical officers. Dr. Todd explained that for nearly two years an arrangement had been followed whereby the projected visit of a medical inspector to any particular district would be announced to all the practitioners in that district. When a defect was discovered in a school child, the parents received a form notifying them that treatment was required for this particular defect. The exact diagnosis was not entered upon the form. The parent was advised to take the child to the usual medical attendant for treatment. The medical practitioner was invited to set out in the form any information in regard to treatment that might be of value to the Department and to post the form to the Principal Medical Officer of the Department of Public Instruction. This arrangement had worked very smoothly and had given satisfaction both to the Department and to the profession.

It was reported that in other States the system of school inspection was far less advanced. In Victoria there were three medical officers, one of whom was still on active service. In South Australia there was only one medical inspector and in Queensland there were four part-time inspectors. Mr. Syme's motion was put to the meeting and was carried.

Mr. G. A. Syme referred the Committee to the report drawn up by the Victorian Branch and more especially to the appendix dealing with proposals for future co-operation of medical practitioners in the promotion of community health. This appendix had also been approved by the New South Wales Branch. It was considered that this report embodied some essential provisions for an improved health service. He expressed the opinion that it would be advisable for the Committee to approve of the report in its entirety. He therefore moved as follows:—

That the following suggestions concerning the future co-operation of medical practitioners in the promotion of community health, be approved.

A material advance will have been made in the practice of public health when the practising profession, who come first into relationship with cases of illness, and who can earliest take adequate measures, have become incorporated as an integral part of the machinery of public health.

In infectious diseases, under the present system, the medical attendant is under an obligation to notify the existence of the case, but having done this, his responsibility ceases, and any measures for the control of the infection are applied on the instruction of the Medical Officer of Health.

There is no reason why the medical attendance should not be charged with the additional responsibility of giving written directions to contacts which would be legally binding on the persons concerned, and additionally the medical attendant might well be required to take those steps which are now recognized to be necessary for the proper control of infectious diseases, such as:—

Taking and forwarding for examination swabs from diphtheria patients and contacts.

Obtaining verification of diagnosis in suspected cases of typhoid fever.

Sending for examination specimens of fæces before the release of typhoid fever patients.

Inoculating all house and family contacts with a prophylactic dose of vaccine in the case of typhoid.

Examining and reporting upon the condition of all house and family contacts in the presence of a case of open tuberculosis and advising the District Health Officer of the presence of any early manifestations of tuberculosis, together with recommendations for appropriate institutional treatment.

Other similar functions in connexion with infectious diseases would be added from time to time, functions which can well be discharged by the family medical attendant, working under the direction of the Health Department.

In many other directions, *e.g.*, in connexion with infant welfare work, prevention of puerperal mortalities, treatment of ascertained defects in school children, the practising profession as a whole could be included in a comprehensive scheme under the general direction of the Health Department for the improvement of the standard of community health.

By means such as the above a great advance could be made in the direction of making preventive medicine an organic part of the practice of medicine generally, without affecting the independence of the practitioner, an advance which would give effect to the desires of those who wish to see the medical profession more actively concerned with the prevention of disease than is the case at present.

For all such services payments should be made according to an approved scale. There would be corresponding responsibilities both on the profession and on the State. The profession would need to be prepared for the imposition of penalties for failure to observe prescribed methods, and the State would have to supply health organization which would command the confidence of the profession in its own domain, and would have to provide the necessary laboratories, whole-time advisory health officers and similar accessories.

After a short discussion, the motion, which was seconded by Dr. R. H. J. Fetherston, was carried.

On the proposal of Dr. Hone, it was decided that the Chairman, the Vice-Chairman, Dr. Fetherston and any other member of the Committee who was prepared to do so, should wait upon the Federal Minister and present the views of the Committee to him.

On the motion of Dr. Sandes, it was determined to postpone the consideration of those portions of the reports dealing with curative medicine.

Relationship of Overseas Branches to the Parent Association.

Dr. R. H. Todd dealt in considerable detail with the negotiations which had taken place between the British Medical Association in London and the Branches in Australia concerning the question of local autonomy. He read an excellent summary which he had prepared, of the correspondence, including comments on each point raised. He moved that the Council of the Association be thanked for the manner in which they had dealt with the desires of the Australian Branches and that it be explained to the Council that the Federal Committee was prepared to accept the position, as set forth in the last communication of the Council. He also suggested that the Council in London be asked to make the necessary amendment of the by-laws, to enable the Branches in Australia to determine the amount of subscription payable by the members without reference to the parent Association.

Mr. G. A. Syme asked the Committee to add to the letter a specific enquiry as to whether the Australian Branches had power to hold annual general meetings of the Australian Branches of the Association and to appoint a representative body in Australia in the same way as is done by the parent Association. The suggestions were accepted.

(To be Continued.)

Deputations to Ministers.

The Chairman of the Federal Committee, Dr. W. T. Hayward, the Vice-Chairman, Mr. G. A. Syme, Dr. R. H. J. Fetherston, a member of the Committee and Dr. J. H. L. Cumpston, the Director of Quarantine, waited on the Acting-Prime Minister, the Honourable E. D. Millen, on July 31, 1919, for the purpose of laying before him the views of the Committee in regard to the extension of public health activities. Dr. Hayward placed a copy of the resolutions that had been passed by the Federal Committee (see the report of the meeting of the Committee, pages 118-120). The members of the deputation explained the attitude of the medical profession in connexion with the subject of preventive medicine and hygiene.

Senator Millen assured the deputation that he recognized the importance of the subject. He thanked them for having brought the resolutions to his notice and promised that as soon as the strike troubles had been removed, he would consult the Director of Quarantine with a view to bringing the recommendations of the Federal Committee before Cabinet. He asked permission to publish the resolutions in the daily press. Dr. Hayward agreed to this proposal.

Dr. Hayward and Dr. Fetherston also interviewed the Acting Minister for Defence, the Honourable E. J. Russell, on the same day. They called the attention of the Minister to the alleged unfairness in the treatment of the younger members of the Australian Army Medical Corps who had not been given the privileges on their return to Australia that had been granted to the men in England. Emphasis was laid on the vital importance of this matter. It was necessary not only that every facility, but that every encouragement should be given to these young men to refresh their medical knowledge, both for their personal advantage and more especially in the interest of the community.

Dr. Hayward also dealt with the question of the future of the Army Medical Services. He stated that it was understood that a complete re-organization of the military services would shortly come under consideration. The Federal Committee has requested him to ask the Minister to consult the British Medical Association before a final decision concerning the future organization of the Army Medical Corps was adopted. The Federal Committee was anxious to assist in securing the best collaboration of the medical profession for the medical services and was prepared to advise the Department in matters of professional details.

In his reply, Mr. Russell said that as far as he was aware no promise had been given to the medical officers in Great Britain that they would remain on full pay while holding hospital appointments in Australia. The reason why these terms had been offered in Great Britain was that, as so many of the medical officers were obliged to remain in Great Britain, it was considered desirable that they should utilize the time of more or less enforced idleness by improving their professional education. Had he been able to get these men back to Australia at once, the offer would not have been made. Mr. Russell agreed with Dr. Hayward and Dr. Fetherston as to the desirability of men doing "refresher" work on their return from active military service. With this object in view, he had issued instructions that the men on home service should be allowed one third of the day for this purpose, but he had been informed that the proposal was not workable. He was most anxious to further the object and would give favourable consideration to any method recommended by the British Medical Association. He also promised that in the event of any project for the re-organization of the Army Medical Department being brought forward, he would consult the British Medical Association.

DINNER TO THE MEMBERS OF THE FEDERAL COMMITTEE.

The President and Council of the Victorian Branch of the British Medical Association entertained at dinner at the Oriental Hotel, Melbourne, the members of the Federal Committee, Dr. W. T. Hayward, Chairman, Mr. G. A. Syme, Vice-Chairman, and Drs. J. Espie Dods, R. H. J. Fetherston, J. Lockhart Gibson, F. S. Hone, F. P. Sandes and R. H. Todd, as well as the Editor of *The Medical Journal of Australia*, on July 29, 1919. The President, Dr. J. Ramsay Webb, extended a very cordial welcome to his guests and in eulogizing the valuable work which the Federal Committee had carried out, did not forget to make graceful reference to the loyal service which several of the members of the Committee had rendered to the country, as members of the Australian Imperial Force.

The toast of the Federal Committee was honoured with enthusiasm and each of the guests in turn was called upon for a brief speech in reply.

AUSTRALASIAN MEDICAL PUBLISHING COMPANY, LIMITED.

Annual Meeting.

The annual general meeting of members of the Australasian Medical Publishing Company, Limited, was held in the Medical Society Hall, East Melbourne, on July 28, 1919. The following is the report of the Directors:—

Directors' Report.

"The Directors submit their report for the past year and balance sheet as at June 30, 1919, together with profit and loss account for the twelve months ended June 30, 1919.

"*The Medical Journal of Australia* has now entered upon its sixth year. In regard to the business side of the enterprise the war conditions which have embarrassed progress hitherto have continued unabated during the past twelve months. The great war, however, has now come to an end; and, despite the prospect of prolonged industrial trouble, the position of the paper as a business undertaking is probably more favourable than at any time in the past. From the scientific and literary standpoints the *Journal* has well maintained its status among medical newspapers and has advanced in the appreciation of the medical profession in Australia.

"Dr. W. H. Crago and Dr. W. Kent Hughes retire from the Board of Directors in accordance with the requirements of the Articles of Association, and are eligible and offer themselves for re-election.

"W. H. CRAGO,
"Chairman.
"July 28, 1919."

Dr. W. H. Crago and Dr. W. Kent Hughes were re-elected Directors of the Company. It was announced that the Directors in the exercise of their powers under Article 44 of the Articles of Association, had appointed Dr. J. Espie Dods a Director, to fill the vacancy created by the resignation of Dr. W. N. Robertson.

The undermentioned have been nominated for election as members of the New South Wales Branch of the British Medical Association:—

George Herbert Bennett, Esq., M.R.C.S., Eng., 1887; L.S.A., Lond., 1884, c/o. Mrs Miller, Public School, Windsor.

Gerald Septimus Samuelson, Esq., M.B., Ch.M., 1888., M.D., 1893 (Univ. Edin.), Ross Street, Bay Road, North Sydney.

Lewis Windermere Nott, L.R.C.S.E., L.R.C.P.E., L.R.F.S., and P. (1918, Glasg.), "Woongarra," Cremorne Point, Sydney.

The undermentioned have been elected members of the Victorian Branch:—

Eric Ivo Lowther Graves, Esq., M.R.C.S., Eng., L.R.C.P., Lond., 1889, Moreland.

E. Mackenzie, Esq., L.R.C.P., L.R.C.S., Edin., L.R.F.P.S., Glasg., 1889, Bunyip.

Charles George Gordon Moodie, Esq., M.B., M.D., 1910 (Melb.), Merino.

M. H. Southwick, Esq., M.B., Ch.B., 1915 (Melb.), 91 Sydney Road, Coburg.

It has come to our notice that confusion has arisen in the minds of persons little acquainted with the family of the Reverend A. A. Aspinall, sometime Principal of Scot's College, Sydney, concerning the members of this family. There were four sons. The eldest, Dr. Archie Aspinall, of Sydney, served with distinction in the Australian Army Medical Corps and returned to New South Wales after the evacuation of the Peninsula. The second son, Major Arthur Martel Aspinall, received his commission in the Australian Imperial Force in June, 1916, was attached to the No. 2 Australian Stationary Hospital for a considerable time and is now returning to Australia on board the troopship *Madras*. The third son is Captain Andrew Eric Aspinall, who received his commission in March, 1916, and has served in the 2nd Australian Casualty Clearing Station. He is at present on board the troopship *Port Lyttelton*. The fourth son was William Robert Aspinall. He, too, joined the Australian Imperial Force early in 1916. He was awarded the Military Cross for conspicuous gallantry and devotion to duty. He was killed in action on July 20, 1917.

Obituary.

RICHARD HORACE GIBBS.

By a peculiarly tragic and comparatively simple accident, the profession in Victoria has sustained a heavy loss in the death of Richard Horace Gibbs. At the time of his death he was Senior Surgeon at No. 16 Australian General Hospital, Macleod, and had been engaged in whole-time military service for a period of eighteen months.

Richard Horace Gibbs, eldest son of the late Richard Gibbs, barrister-at-law and Registrar-General of Victoria, and Mrs. Gibbs, now of Malvern, was born in Melbourne on August 12, 1864.

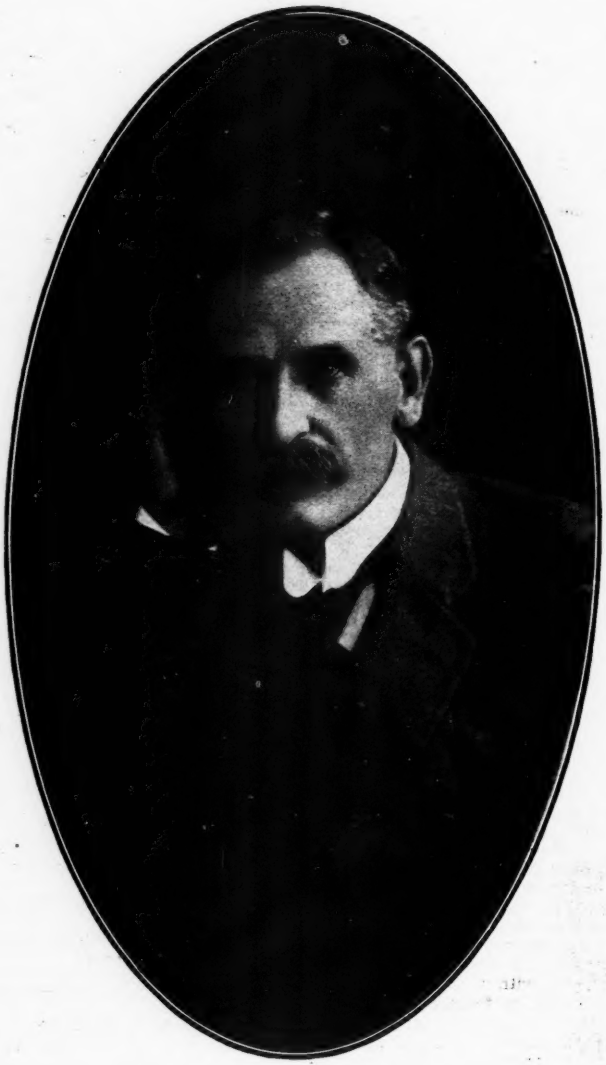
He received his early education at the Yarra Park School and later at St. Paul's School, Melbourne, proceeding to the Melbourne University in 1884, with the intention of qualifying in medicine and surgery. However, in 1889, he decided to complete his studies in Edinburgh, where he obtained the diplomas L.R.C.P. *et* L.R.C.S..

Richard Horace Gibbs returned to Australia and engaged in practice at Warracknabeal, Victoria. Whilst there, he married Helen Maconochie, fourth daughter of the late James Maconochie, of Poligolet Station, Camperdown. Later, he removed to Sale, where he established a very large practice, with an important hospital connexion as Honorary Surgeon.

In 1901, he disposed of his practice in Sale and returned to Scotland in order to pursue post-graduate study in surgery. His efforts in this direction secured for him the Fellowship of the Royal College of Surgeons of Edinburgh.

On his return to Australia in 1903, Richard Horace Gibbs settled in Colac, the district with which he subsequently became so prominently identified. His association with the Colac District Hospital was long and distinguished and he was known widely among the profession in Victoria as a sound surgeon and as a practitioner thoroughly versed in his work.

The outbreak of war found Horace Gibbs at Colac and the part played by him and his family in the ensuing stress constitutes a proud and honourable record. He entered vigorously into the work of securing recruits for active service, acting on the local committee and giving his services in the examination of volunteers.



His eldest son, Richard Horace Maconochie Gibbs, was at this time a student in medicine. On the completion of the third year of his course, he offered himself for service abroad and subsequently left with the Australian Imperial Force as a Lieutenant of infantry. He met his death in action near Armentières, France, and for conspicuous gallantry was awarded the Military Cross. His second son, Corporal Jack Harbinger Gibbs, served in Egypt, Gallipoli and later in an administrative post in London. However, rigorous life on the Peninsula had so undermined the lad's health, that he died just four weeks after returning to his home in Colac.

It was after the loss of his two sons that Richard Horace Gibbs decided to relinquish his practice and to devote the rest of his days to the service of the boys who were returning, wounded and sick. In March, 1918, he was gazetted Major and appointed Senior Surgeon at the Macleod Military Hospital, a post he retained until his death. He leaves a widow, one son and two daughters, to whom, in their sudden bereavement, the spontaneous and heartfelt sympathy of his professional colleagues will be extended.

Richard Horoace Gibbs was always a hard worker and allowed himself little leisure. Whenever he took a holiday, he chose the sea-side, for he was passionately fond of the sea. While at Colac, he greatly revived the local interest in yachting and was Commodore of the Colac Yacht Club for several years.

A man of fine character and great worth, he was held in such affection by his soldier patients at Macleod that his death cost a gloom over the whole establishment.

Dr. J. F. Wilkinson writes:—

It was my privilege to have been closely associated with the late Major Gibbs during a past six months at No. 16 Australian General Hospital, Macleod, and during that period, I learned to realize what a choice spirit he possessed. His health was not good and he was unable to go abroad on war service, so he devoted his time and talents to doing what he could for the disabled and crippled returned men. He was devoted to his work and esteemed nothing too much trouble as long as he could help any of the men who had fought and suffered. He had felt keenly the loss of two of his boys as a result of war service and often expressed his feelings to me that nothing he could do was too much for the men under his care.

I was with him up to an hour or so before the fatal accident and almost the last things he said to me were that as long as his services were required, he would stay on and do all he could for the boys. He was quite willing to retire at any time and make way for a returned surgeon, should such an one be found ready to take up the work at the Hospital, but until such an one offered, he would stay and carry on the splendid service he was rendering.

Major Gibbs was an able surgeon, with a wide knowledge of his work and a deep sympathy for the sufferer. He was beloved of all the staff and esteemed and trusted by all who came under his care. He had thoroughly organized the surgical work of the Hospital and by his tragic death, the military authorities have suffered the great loss of a devoted servant and his family and friends a very great bereavement.

Correspondence.

RADIOGRAPHIC EVIDENCE OF MALPRAXIS.

Sir,—In the number of our *Journal* of July 26, Dr. Stacy attempts the dangerous task of putting forward a single radiogram as evidence of malpraxis.

We should be very wary of accepting such evidence.

The radiogram must be considered in conjunction with many other signs. Due consideration must be given to the nature of the accident, the signs at the time of injury (and for weeks afterwards), the presence of shock and collapse, sepsis (both local and distant), the presence of more serious injuries elsewhere and the facilities available for efficient treatment.

Possibly the fracture may have united before the patient's condition allowed of interference and it is always a serious matter to interfere with any form of united femoral fracture.

Further, we have no knowledge of the position of the limb at the time the radiogram was taken.

Let us always remember that a radiogram is not a photograph, but is only a record of a shadow and by displacing the source of light, it is possible to cause extreme degrees of distortion (I may add that such distortion is nowhere more apparent than in radiograms of fractures of the femoral shaft above the middle).

Unless all these points have received due consideration, we are not justified in giving any opinion from a radiogram taken in only one plane.

Yours, etc.,

J. G. EDWARDS, M.B., M.S.

Sydney, July 26, 1919.

FEEBLE-MINDEDNESS AND PROSTITUTION.

Sir,—As the publication of the names and address on my letter in your issue of the 19th inst. may cause an impression that either Miss Yencken or the Sisters of the Church of England knew of it, please allow me to state that Miss Yenchen and the Sisters of the Church were totally unaware of its contents and Miss Yencken has never interested herself in, or expressed any opinion whatever on, such a subject, and I feel sure it would cause serious annoyance were the above impression created. I am sorry if my carelessness in not asking you to withhold names and address has caused any false impression. My letter was not written in collaboration with, or read by, any person whatever, and I am solely responsible for the views expressed in it.

Yours, etc.,

M. T. WALLACE.

July 24, 1919.

Sir,—Students of the conditions governing prostitution will thank you for your renewed effort to get proper provision for the feeble-minded. In your leader of the 27th instant, you refer to the part played in the traffic of prostitution by mental deficients and the point is stressed that the control of these persons is a medical problem which would "be doomed to failure if entrusted to laymen." The very natural question then arises why does not the medical faculty do its own business? The B.M.A. is a powerful organization. If it made the proper care of mental deficients its own concern and took steps to get public opinion with it, it is inconceivable that the necessary means would not be forthcoming.

The girls segregated at Coode Island for venereal treatment are of so poor a type that mental tests are unnecessary to convince an experienced observer that they are unfitted to take care of themselves. But these cases are too selective to be of any value as an indication of the part played by degeneracy in prostitution in Melbourne. As soon as the girls are cured they are let out into the community to be reinfected, treated and housed again at the expense of a government that cannot find means to deal properly with them.

But though mental deficiency is the concern of medicine, is prostitution itself a medical problem? I submit that the mental deficient and the lascivious girl do not form the greater part of this problem. If we were able to remove all deficients and lascivious women from the community at a given hour, would sexual morality be helped thereby? We must ask where the sexual energy of the partners would spend itself—an energy unaccustomeed to control and habituated to all kinds of artificial stimuli? Would not persuasion and seduction achieve the moral ruin of the isolated and unprotected girl and would we not have again the old condition of promiscuity?

You justly remark on the lamentable failure of reformers to bring about any appreciable diminution of the evil. But surely it is evident that all past efforts were foredoomed to failure, since they were only directed to one partner in the traffic—the woman. They left untouched the chief provoking cause, the demand in the male.

We have frequently pointed out that this is the right starting point—take away the demand and the supply will fall off. This and the allied question of social conditions are the proper business of sociologists.

Yours, etc.,

ANGELA BOOTH,
Honorary Secretary,
Association to Combat the Social Evil.

North Melbourne,
July 27, 1919.

CLINICAL PATHOLOGY.

Sir,—Your remarks on clinical pathology in *The Medical Journal of Australia* of July 26, 1919, p. 72, deserve the serious consideration of the medical profession.

The problem to be attacked consists of facilitating the means of examination by the methods of clinical pathology and reducing the cost to the patient.

Even in the large centres of population, specialists in clinical pathology are not accessible enough to the mass of the people. The laboratories are situated at inconvenient places. The doctor or the patient, or both, must leave his work and travel several miles with a specimen for examination. There are sufficient laboratories and specialists for present demands, but the use of clinical pathological methods must increase in the near future.

Again, outside the public hospitals, the cost of a complete examination is prohibitive for the average patient, when he has to pay for treatment after the diagnosis is made. Only the wealthy classes can afford to go from one specialist to another at the bidding of their medical attendant.

It should be possible to meet both these difficulties by the co-operation of medical men in given areas. Large groups of men should establish institutes in their own districts, where pathological specialists would be employed and their own patients sent. The institute could be made self-supporting by adopting a sliding scale of fees, such as is adopted for other varieties of service.

The establishment of such diagnostic institutes would have a distinct value. There would be encouragement for more men to specialize in clinical pathology. The spirit of unity and co-operation amongst the local medical men, banded together in a common purpose, would be strengthened. The interest in the routine work of the general practitioner would be stimulated.

Yours, etc.,

J. NEWMAN MORRIS.

"Ruardean," 184 Auburn Road, Auburn, Victoria,
August 3, 1919.

THE BEQUESTS OF THE LATE SIR SAMUEL McCAUGHEY.

The will of the late Sir Samuel McCaughey, dated February 1, 1918, provides for the distribution of a residue of the estate, estimated at £1,394,000, to a number of educational, religious and charitable institutions. The Sydney University will benefit to the extent of £465,000, the Brisbane University to the extent of £232,000, and the following hospitals will receive £5,000 each, namely, Sydney Hospital, the Royal Prince Alfred Hospital, the Royal Alexandra Hospital for Children, Bourke Hospital, Jerilderie Hospital, Narrandera Hospital and Urana Hospital. These bequests represent the items of more or less immediate concern to the medical profession. In addition, soldiers and their de-

pendants will receive £465,000, while other large sums will be handed to the Presbyterian Church, various schools and other institutions.

Books Received.

TUBERCULOSIS OF THE LYMPHATIC SYSTEM, by Walter Bradford Metcalf, M.D.; 1919. New York: The Macmillan Company. Sydney: Angus & Robertson, Ltd.; Royal 8vo., pp. 216. Price, 15s.

QUARTERLY MEDICAL CLINICS, A Series of Consecutive Clinical Demonstrations and Lectures, by Frank Smithies, M.D., at Augustana Hospital, Chicago, Volume I., No. 1; published by Medicine Surgery Publishing Company, Inc., St. Louis. Royal 8vo., pp. 188, illustrated. Annual subscription: $5, paper; $8, cloth. Single copies: $1.50, paper; $2.50, cloth.

Medical Appointments.

The appointment of Dr. N. E. B. Kirkwood (B.M.A.) as Government Medical Officer at Port Kembla, New South Wales, is announced.

For the purposes of *The Workers' Compensation Acts, 1916 to 1918*, Dr. M. S. Patterson (B.M.A.) has been appointed Medical Referee for the whole of the State of Queensland.

The appointment of Dr. H. W. Moxon as Medical Officer to the Northampton Road Board, Western Australia, has been approved.

Dr. A. A. Lendon (B.M.A.) and Dr. R. S. Rogers (B.M.A.) have been appointed Official Visitors to the Mental Hospital at Parkside, South Australia.

The Board of Public Health of Victoria has approved of the appointment of Dr. W. A. Morton (B.M.A.) for the East Riding of the Shire of Melton.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xxi.

Hospital for Sick Children, Brisbane: Resident Medical Officer.
Newcastle Hospital, N.S.W.: Junior Resident Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Friendly Society Lodges, Institutes, Medical Dispensaries and other Contract Practice. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Cloncurry Hospital.
TASMANIA. (Hon. Sec., Macquarie Street, Hobart.)	Medical Officers in all State-aided Hospitals in Tasmania.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIA. (Hon. Sec., 6 Bank of New South Wales Chambers, St. George's Terrace, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United Friendly Societies' Dispensary. Canterbury United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Friendly Society Lodges at Lithgow. Friendly Society Lodges at Parramatta, Auburn and Lidcombe. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. Newcastle Collieries—Killingworth, Seaham Nos. 1 and 2, West Wallsend. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society..
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

Aug. 12.—N.S.W. Branch, B.M.A., Ethics Committee.
Aug. 13.—North-Eastern Med. Assoc. (N.S.W.).
Aug. 14.—Vic. Branch, B.M.A., Council.
Aug. 15.—Central Southern Med. Assoc. (N.S.W.).
Aug. 19.—Tas. Branch, B.M.A., Branch and Council.
Aug. 19.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Aug. 19.—Illawarra Suburbs Med. Assoc..
Aug. 20.—W. Aust. Branch, B.M.A., Branch and Council.
Aug. 21.—City Medical Assoc. (N.S.W.).
Aug. 22.—Q. Branch, B.M.A., Council.
Aug. 26.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
Aug. 27.—Vic. Branch, B.M.A., Council.
Aug. 28.—S. Aust. Branch, B.M.A..
Aug. 29.—N.S.W. Branch, B.M.A..
Sept. 2.—Tas. Branch, B.M.A., Branch and Council.
Sept. 3.—Vic. Branch, B.M.A..
Sept. 9.—N.S.W. Branch, B.M.A., Ethics Committee.
Sept. 11.—Vic. Branch, B.M.A., Council.
Sept. 11.—Last Day for Nomination of Candidates Representing N.S.W. Branch for Election to the Federal Committee.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney.